

URBAN LAND ECONOMICS

Urban Land Economics

by Richard U. Ratcliff

*Professor of Land Economics
University of Wisconsin*

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PREFACE

Urban land economics deals with the processes and patterns of land utilization where man and his artifacts are assembled in communities. The subject matter is embraced within the framework of general land economics, which covers the utilization of the entire earth's surface and "the natural forces and productive powers above or below that space over which the owner has property rights."¹ In turn, land economics is but a branch of general economics; economics is a study of the wealth-getting and wealth-spending activities of man and is therefore a study of human behavior. When such behavior is consistent and predictable, hypotheses and principles are derived which are the foundations of the science of economics.

The subject matter of economics has become highly specialized as various economists have refined our understanding of particular areas of economic behavior. Thus we have such branches as agricultural economics, finance, international trade, labor economics, and land economics. These several branches of economics are not to be viewed as separate building blocks assembled to create a general economic science. The branches are overlapping and intermingled in content. They are integrated through the agency of a set of general principles that comprise "economic theory." This conceptual framework of theory is the starting point for inquiry in all the branches of economics; explorations in any one of the branches may lead to modifications and revisions of this framework.

There has long been a need for an organized body of knowledge as a guide for individual business decisions and public-policy determinations affecting urban land utilization. The aggregate of attention to urban land economics within the last thirty years is small, so that we are still at an early stage in the development of this branch of economics. Enough of fact and understanding has accumulated, however, so that the framework or rationale may be discerned and so that there is some

¹ Ely, R. T., and G. S. Wehrwein, *Land Economics* (New York: The Macmillan Company, 1940), p. vi.

meat on the bones. This volume is an attempt at a basic statement; in a field that is immature it can hardly be a final statement.

Our purpose is to present an orderly body of facts and principles that have more or less direct application to the utilization of urban land. Because the processes of land use are essentially economic processes, the subject matter is properly classified as economics. Most of the principles to be discussed are drawn from the general framework of economic theory but are presented here in their special application to land utilization. The very organization of the book is derived from the fundamental economic concept of the market.

The thesis of this volume is that the determination of urban land use is a market process. The use that is made of each parcel is the result of economic competition among alternative uses. Thus the processes of city growth are economic processes and the pattern of land use is the product of the urban land market. Accordingly, the major divisions of the primary subject matter in this book are demand, supply, and market interactions.

The first chapter deals with the commodity that is traded in the market—rights in land. The discussion is placed within an institutional context because an understanding of the institution of private property and its dynamic nature is essential to an understanding of economic processes in the urban land market, where institutional factors are of such great influence.

The next group of chapters presents the demand factors in the urban land market. The underlying forces of urbanism are described and are found to be economic in character. The city is analyzed as a social organism; the noneconomic aspects of demand for the services of land are considered. The special nature of the demand for various types of land use is analyzed with particular attention to the demand for housing.

In the presentation of the supply side of the market, there are descriptive and analytical discussions of the construction industry and the building process. The importance of urban land credit in the operations of the real estate market is recognized in the chapters on real estate finance. Special attention is given to the home mortgage market and to the growth and repercussions of federal intervention.

The culminating subject matter in the consideration of the urban land market first covers an analysis of market functions and organization, with a separate chapter on the housing market. Land income and value are next discussed as intermediate products of market forces, for it is the comparative productivity of alternative forms of land use that is the primary determinant of the final employment of each parcel. Finally,

we consider the evolution and pattern of the urban land use structure as a product of urban land market forces and functions.

A final group of three chapters presents the economic aspects of urban land policy. Housing policy is the subject matter of the last two chapters, where the housing problem is analyzed from an economic viewpoint and three central housing objectives are considered—the control of instability in the housing market, the reduction of the costs of shelter, and the abatement of antisocial housing conditions.

The author's collaborators in this work have been legion, some unwitting, but all willing. There are the scholars who have gone on before, and the contemporaries who have shared in these later years of exploration. Let special credit be accorded to Paul E. Stark, realtor-statesman, who first revealed to me the challenge of the field; to Professor Ernest M. Fisher, now at Columbia University, who was a friend and mentor during the days of graduate study and later as director of the Division of Economics and Statistics of the Federal Housing Administration; and finally, to the young men of the coming generation, particularly Herman G. Berkman, University of Wisconsin, who have contributed greatly to the development of certain chapters.

RICHARD U. RATCLIFF

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CONTENTS

PREFACE	v
CHAPTER 1. THE INSTITUTIONAL ASPECTS OF REAL PROPERTY	1
Urban Land Defined. Physical Characteristics of Urban Land. Space. Immobility. Indestructibility. Heterogeneity. The Public Domain. Land Measurement and Description. The Institution of Property. Feudal Tenure. Realty, Personalty, and Fixtures. Forms of Ownership. Fee Simple Estate. Life Estate. Estates Pur Autre Vie. Dower and Curtesy. Homestead. Estate for Years. Tenancy at Will. Tenancy by Sufferance. Tenancy from Year to Year. Present and Future Rights. Multiple Ownership. Incorporeal Rights. Liens. Transfer of Title. Public Records of Ownership. Limitations on Private Property. Police Power. Eminent Domain. Taxation.	
CHAPTER 2. THE ECONOMICS OF URBANIZATION	19
The Functional Basis of the Urban Economy. Early Urban Forms. Exchange as an Urbanizing Force. Manufacturing and Urbanism. Steam and Transportation. Ancillary Urban Activities. Finance. Other Business Functions. Services. Recreational, Political, and Religious Activities. Agricultural Surplus. Sanitation. Location of Cities. Location of Industry. Functional Variation among Cities. The Economic Base. Forces of Change. Diversification. Changing Factors of Urbanization. Defense. Religion. Political Power. Agriculture. Trade. Manufacturing. Urbanism in the United States. Metropolitanism.	
CHAPTER 3. THE CITY AS A SOCIAL COMPLEX	60
Sources of Urban Population. Natural Increase. Foreign Immigration. Negroes in American Cities. Rural-urban Migration. Population Characteristics. Sex. Age. Marital Status. Family Composition. Educational Status. Occupations. Social Variations among Cities. Dynamics of Population. The Urban Way of Life. Social Characteristics and the Demand for Land.	
CHAPTER 4. DEMAND FOR HOUSING	87
The Quantity of Demand for Housing. Marriages. Death and Divorce. Migration. Sharing of Dwellings. Population and Demand. Elasticity	

of Demand. Measuring the Quantity of Demand. Qualitative Aspects of Demand. Tenure. Recent History of Home Ownership. Basic Forces Affecting Tenure. Custom. Occupation. Age and Family Status. Financial Status. Relative Costs. Other Forms of Tenure. Type and Size. Style. Location. Price and Rent. Testing the Quality of Demand. Housing for Unattached Adults.

CHAPTER 5. DEMAND FOR NONRESIDENTIAL SPACE . . . 123

Demand for Retail Space. Quantitative Demand for Retail Space. Quality of Demand for Retail Space. Location. Site-selection Practice among the Chains. Variety. Women's Dresses. Drugs. Restaurants. Haberdashery. Shoes. Groceries. Shape of Parcel. Demand for Office Space. Demand for Wholesale Space. Demand for Industrial Space. Land for Public and Semipublic Uses.

CHAPTER 6. THE CONSTRUCTION INDUSTRY . . . 146

General Nature of the Industry. Productivity. Importance in the National Economy. Cyclical Movements. Amplitude and Length of Cycles. Cyclical Sequence of Events. Cyclical Factors. Cycle History, 1918 to 1946.

CHAPTER 7. THE BUILDING PROCESS . . . 164

Land Development. Land Subdividing in the Production Process. The Process of Land Development. Land Planning. Social Controls. Private Restrictions. Installation of Improvements. Financing. Commercial and Apartment Sites. Conclusions on Land Development. Production of Structures. Nature of the Construction Operation. The Design Function. The Building Process. Competitive Bidding. Functions of the General Contractor. Characteristics of Builders. Residential Builders. Working Capital. Building Materials. Building Labor. Obstacles to Rationalization. Prefabrication.

CHAPTER 8. URBAN LAND CREDIT 207

Functions of Land Credit. Forms of Land Credit. Mortgage Financing. Junior Mortgages. Land Contract. Long-term Lease. Home Financing. Financing Construction. Ground-rent Financing. Refinancing. Lending Terms. Loan Servicing. Pattern of Mortgage Lending. Mortgage Risk Analysis. Financing Income Properties.

CHAPTER 9. THE HOME MORTGAGE MARKET 233

Organization of the Market. Mortgage Lenders. Individuals. Savings and Loan Associations. Banks and Trust Companies. Mutual Savings Banks. Life Insurance Companies. Other Lending Agencies. Background of Federal Intervention. Federal Home Loan Bank System. Federal Savings and Loan Associations. Federal Savings and Loan Insurance

Corporation. Home Owners' Loan Corporation. Federal Housing Administration Title I: Property Improvement Loans. Title II: Mutual Mortgage Insurance. Title VI: War Housing Insurance. Evaluation: Insurance of Home Mortgages (Secs. 203 and 603). Rental Housing; Secs. 207, 210, and 608. Title III: Federal National Mortgage Associations. Secondary Market for FHA-Insured Mortgages. Guaranty of Home Loans to Veterans.

CHAPTER 10. URBAN LAND MARKET FUNCTIONS AND ORGANIZATION 280

The Market Concept. The Commodity. Market Functions. Distributing Existing Space. Adjusting the Supply of Space. Price Determination. Timing of Land Improvement. Determining the Amount of Capital Improvement. Determining Land Use. Market Organization. The Sellers. The Buyers. The Broker. The Transaction. Submarkets. Local Nature of the Market. Market Imperfections.

CHAPTER 11. THE HOUSING MARKET 302

The Housing Stock. The Market for Building Lots. Rental Market. Existing Stock of Rental Units. Marketing Rental Dwellings. Rental Housing Origins. Market for Homes. Value Stratification and Filtering. Surplus as a Requisite. Change in Quality. Need for New Construction. Surplus as a Check on Production. Surplus at the Bottom. Accelerated Depreciation. Time Dimension in Filtering. Market Experience with Filtering. Long-run Possibilities. Filtering Cannot be Forced. Conclusions on Filtering. Cyclical Fluctuations. Market Indicators. Seasonal Fluctuations. Cyclical Sequence. Recent Housing Market History. Manifestations of Instability.

CHAPTER 12. LAND INCOME AND VALUE 346

Gross Income. Land Utilization Costs. Differential Returns and Capital-cost Combinations. Value and Valuation. Land Return and Economic Rent. Land and Capital. Rent as Unearned. Rent as a Monopoly Return. Rent and Price.

CHAPTER 13. CITY GROWTH AND STRUCTURE 368

Basic Theory of Land Use Structure. Competition of Uses. Minimizing the Costs of Friction. Location or Situs. Retail Location Characteristics and Buying Habits. Purchaser. Postponability. Selection. Frequency. Convenience-desirability. Analysis of Retail Structure in Terms of Buying Behavior. Market Forces and City Planning. Internal Arrangement of Land Uses. Retail Structure. Wholesale and Industrial Areas. Residential Areas. City Growth. Lateral Expansion. Internal Shifts. Movement of Residential Areas. Economics of Succession.

CHAPTER 14. URBAN LAND POLICIES 406

Nature of Social Control. City Planning The Planning Process. Zoning. Subdivision Control. Taxation of Real Property. Incidence of Taxation. Tax Administration. Deficiencies of the Property Tax. Directing Investment through Tax Policy. Urban Redevelopment. Inhibitors of Succession. Resistance of Net Revenue to Decline. Withholding for a Future Higher Use. Diversity in Economic Expectancy. Inefficient City Structure. Redevelopment Legislation.

CHAPTER 15. THE ECONOMICS OF HOUSING POLICY 434

Part I. The Nature of the Housing Problem. Imbalances and Rigidities in the Postwar Housing Market. Origins of Postwar Rigidities. Long-term Implications. The Legacies of Prewar Confusion. Basic Housing Issues. Housing Objectives. *Part II. The Control of Instability.* Modifying the Imperfections. Changing the Commodity. Relaxing Institutional Limitations. Sensitizing Supply. Rationalizing the Building Industry. Stabilizing Demand. Stability through Social Control. Stabilizing Prices. Controlling Production. Stabilization through Mortgage Credit. Stabilization through Understanding. Conclusions on Instability. *Part III. Reducing the Costs of Shelter.* Significance of Housing Costs. Cost Defined. Differential Importance of Costs. Capital Costs: Implications of Reduction. Capital Costs: Reduction Potentials. Building Land Labor Costs. Technological Advance. Costs of Industrial Disorganization. Product Design. Cost of Money. Property Taxes. Maintenance. Depreciation. Price Levels. Conclusions on Housing Costs.

CHAPTER 16. THE ECONOMICS OF HOUSING POLICY (*Continued*) 487

Part IV. The Regulation of Substandard Housing Conditions. The Problem. What Is Substandard Housing? Why Has Police-power Regulation Failed? Administrative Deficiencies. Lack of Alternative Accommodations. Regulation of Overcrowding. Control of Substandard Environment. Prevention of Substandard Housing. Conclusions on Police-power Regulation. *Part V. The Relief of Substandard Housing Conditions by Unaided Private Capital.* Direct Private Construction. Reconditioning. Conversion. New Construction. Filtering Down. *Part VI. Subsidy Devices for Relieving Substandard Housing Conditions.* The Rent Certificate Scheme. Results with Supply Constant. Integration with Police-power Controls. Influence on Rent Levels. Long-run Effects. Conclusions on Rent Certificates. Subsidy to Private Building Operations. The Planning Function. Risk Taking. Borrowing. Contracting. Management. The Public-housing Formula. Competition with Private Capital. Failure to Pay Taxes. Other Alternatives. Conclusions on the Abatement of Substandard Housing Conditions.

CHAPTER 1

THE INSTITUTIONAL ASPECTS OF REAL PROPERTY

The commodity traded in the real estate market takes the form of rights in land. These rights are found in a wide variety of combinations constituting various forms of ownership or tenure, which have evolved out of the necessities of commerce and to meet the need for split interests in land. The privileges and duties of ownership enforced by the rules of law, together with the limitations imposed by society through law and regulation, constitute the modern institution of property, under whose aegis all transactions in real estate are consummated.

The first task is to identify the property object, urban land, and to consider the physical characteristics of land. Attention will then be given to the institution of property, its origins and evolution, for it is this social institution which has crystallized the rights in land into merchantable entities, and it is property and contract that are the very foundation of our economic order. Finally, there is to be a brief discussion of the more common interests in land, subdivisions of that bundle of rights in real estate which constitutes full ownership. There can be no attempt to present the voluminous rules of law that determine the precise content of each of these variant interests in land. For that, the student is referred to one of the many excellent treatises on real property law.¹ There will be, however, a definition sufficiently descriptive to reveal the fundamental rights and privileges in each form of ownership or tenure.

Urban Land Defined

The early economists considered land as coextensive with all natural resources. One writer has expressed this concept as follows: “. . . land

¹ McChesney, N. W., *Principles of Real Estate Law* (New York: The Macmillan Company, 1927); Grange, W. J., *Real Estate* (New York: The Ronald Press Company, 1937); Kratovil, Robert, *Real Estate Law* (New York: Prentice-Hall, Inc., 1946).

is . . . the complex of natural opportunities offered to labor and capital.”² But we shall adopt the more physical view that the word “land” refers to the crust of the earth and the space above it. That which we consider to be land may be classified as follows:³

- I. Surface land
 - A. Agricultural land
 - B. Forest land
 - C. Land for transportation and communication
 - D. Recreational land
 - E. Land for site purposes
 - 1. Urban—transportation
 - manufacturing
 - mercantile
 - residential
 - recreational
 - institutional
 - 2. Nonurban building sites
- II. Water resources
- III. Subsurface mineral rights
- IV. Supersurface air rights

Urban land, then, is surface land of economic value as the location of various land uses within urban areas. The term “urban” is difficult to define with exactness. There is no difficulty in recognizing the main body of a city or town, characterized by a more or less dense agglomeration of people and buildings. But within the urban-rural fringe, where city and country meet, it is difficult to establish definite boundaries for strictly urban land. In fact, the city, in a broad sense, is composed of a number of overlapping and irregular zones of political, social, and economic influence, each zone with its focus in the same central urban nucleus, but with the periphery of each zone geographically independent of the other zones. There is no single boundary marking the terminus of all urban influences. The bulk of this book is to be concerned with the characteristics of urban land, so that we shall be in a much better position to define it at the end than at the start. Suffice it to say here that we are concerned with land that exhibits the characteristics of urban land, land that, in the opinions of men who own it or are negotiating for

² Geiger, G. R., *The Theory of the Land Question* (New York: The Macmillan Company, 1936), p. 17.

³ Classification after Ely, R. T., and G. S. Wehrwein, *Land Economics* (Ann Arbor, Mich.: Edwards Bros., Inc., 1936, subsequently published by The Macmillan Company, New York, 1940), p. 5.

it, is now used or is destined to be used for activities that are characteristic of urban areas.

Physical Characteristics of Urban Land

The economic characteristics of land are in part determined by the physical characteristics. Certainly the physical attributes of any commodity are factors of great weight in determining the processes of production, the channels and techniques of distribution, and the nature of its use or consumption.

Space. The most significant physical dimension of urban land is area. We shall see that, in dealing in urban land, the commodity traded is the control of space, for land of this class derives its value from use as the site or locus of buildings and other improvements. It is true, furthermore, that the shape of the space is of importance in determining the use to which it can be put. For example, a deep, narrow parcel located in a business district might be suitable only for a parking lot or small store building, whereas a parcel of the same area, but with greater frontage and less depth might provide the site for an office building. Thus both the space provided and the shape of that space are physical characteristics of urban land that influence economic behavior.

Immobility. The space on the earth's surface cannot be moved or transported. Each unit lies in an immutable physical relationship with every other unit. Thus urban land must be used where it is found and cannot be shifted to a more favorable market. It lies helplessly vulnerable to external social and economic forces which determine its use and influence its value.

Indestructibility. Space on the earth's surface cannot be created or destroyed. Unlike the buildings with which it is combined to produce the services of urban real estate, space cannot become depleted, though the buildings fall and the city disappear.

Heterogeneity. The geometric division of the earth's surface into areal units of ownership has imparted to each unit an individuality that arises from its geological characteristics and from its special geometric relationship to every other unit and to the several elements of the physical world. No two building lots are oriented identically with respect to any other lot or to all lots, nor with respect to the wind and the sun. These differences may or may not have economic significance. However, important physical variations often do exist between locations and weigh heavily in the determination of value. In addition to differences in orientation, there are differences in soil conditions which affect the cost of erecting buildings or improvements on the site. Variation in costs of

improvement as well as in desirability for various uses may arise from differences in contour, gradient, and elevation.

The Public Domain

In Colonial days in this country, the King of England, as original owner of all land claimed for the British Crown, conveyed large tracts to proprietors and companies for exploitation. In some cases, these owners established forms of feudal tenure, but most of the land was ultimately sold or granted to individual settlers. After the Revolutionary War, the last remnants of feudalism were wiped out by legislation. The Federal government came to own the public domain, which included vast areas stretching west from the original thirteen states. The public domain was extended by purchase, conquest, and treaty, and a total of 1,309,591,680 acres came under the full control of the Federal government.⁴ Under the Constitution, the states or territories had no original rights in such land. It became a national policy to alienate or sell off to private owners the public domain. This policy was based on the belief that the wide extension of land ownership would result in the highest productivity for the nation. Furthermore, the revenue from the sale of the public domain was counted on to get the country out of debt. The practice of retaining public lands in government ownership for recreational purposes did not come until 1872, when Yellowstone National Park was established. The first reservation of forest lands came in 1891.⁵

Much of the public domain was sold off at a price that, from 1820 to 1891, was stabilized at \$1.25 per acre regardless of quality.⁶ Under the homestead law, passed in 1862, land was granted free to a settler who would occupy and improve his homestead. At the end of five years of occupancy, a deed or patent was issued to the settler granting him full ownership. This patent or deed from the United States government, whether the land was acquired by purchase or under the homestead plan, became the basis of all subsequent ownerships in the chain of title.

Two-thirds of all the land area of the United States has been disposed of under the various land acts. There remains in public ownership some 430 million acres, of which about one-half is administered by some branch of the Federal government for recreational, conservation, and other purposes; much of the balance of the public lands is unreserved and unappropriated, but an additional 142 million acres is reserved as grazing districts.⁷

⁴ Ely, R. T., and G. S. Wehrwein, *Land Economics* (New York: The Macmillan Company, 1940), p. 89.

⁵ *Ibid.*, p. 90.

⁶ *Ibid.*

⁷ *Ibid.*, p. 96.

Land Measurement and Description

The ancient method for describing tracts of land was known as "description by metes and bounds." This method, which is still used under some circumstances, involves reference to certain natural landmarks such as trees, stones, or the confluence of rivers. The description begins at some point located with reference to a natural landmark and sets forth the directions and distances that define the boundary of the plot from the point of origin to succeeding points around its perimeter until the point of origin is once more reached. This method of description is still used in the older sections of this country. However, it has the obvious disadvantage of requiring unusual care and precision in order to avoid errors. Furthermore, the landmarks occasionally disappear and the points of reference shift with the passage of time.

Much of this country was originally surveyed by the Federal government before the public domain was sold off to private individuals. In the process of surveying, lines of reference were established and permanent monuments installed so that there is provided a convenient and certain method of land description. In the process of the original government survey the country was marked off with 20 principal meridians or lines running directly north and south. At intervals of 6 miles, lines were run parallel with the principal meridians. However, because of the curvature of the earth, the lines dividing the land into 6-mile strips gradually converged, so that it was necessary to correct the lines every 24 miles. The main east and west lines were called "base lines," and lines were run parallel to the base lines every 6 miles. The result of this process was to produce blocks of approximately 6 miles square, which are known as "townships." The townships were surveyed and cut into squares of 1 mile on each dimension, which are known as "sections." Each section contains approximately 640 acres. These sections have been customarily subdivided into halves or quarters and even smaller fractions to accommodate the normal units of ownership in agricultural areas.

When it is necessary to describe plots of land of relatively small dimensions, such as city lots, direct reference to the original survey becomes cumbersome. This difficulty has been overcome by the practice of recording entire subdivisions and referring to individual lots by lot and block number. When subdivisions are originally laid out, a map is prepared that is keyed into the government survey. The entire tract is identified by an exact legal description, which is certified to by the surveyor and the owner. When the proposed subdivision has met all legal requirements and has been approved by the authorities, their ap-

proval is indicated on the map and the map is filed with the official recording office for entrance into the official plat book. This map becomes a matter of public record and the individual lots in the subdivision may be described simply by reference to the lot number and block number and the recorded name of the subdivision.⁸

The Institution of Property

In its popular connotation, the term "property" refers to land and buildings in the case of real property and to various movable articles in the case of personal property. But the real estate market deals in rights, not directly in the land and buildings that are the property objects. For instance, in making a lease, the right of possession is exchanged for a consideration known as "rent." In an outright sale of land, full ownership involving a complex of rights is the economic good that changes hands. These rights, and the legal limitations that define them, are constituents of the social institution of property.

Property, in the sense of ownership, has been defined as "the exclusive right to control an economic good."⁹ Property has no significance where the property object has no economic value. Property raises a wall about ownership to exclude all others. Property cannot defend itself and cannot exist without an enforcing agency created by society.¹⁰ Only human beings have the capacity for ownership; property would have no meaning outside the realm of human relationships, for property cannot exclude others where no others exist.

The distinction between public and private property is based upon the nature of the owner. Private property is controlled by individuals or organizations of individuals such as corporations and partnerships. Public property belongs to governmental agencies. There is another property type known as "qualified property" to cover objects that have an uncertain status, such as wild fish and game, which are the property of the state until shot or captured and which thereupon become private property provided that the game laws of the state were not violated.¹¹

Various explanations of the origins of private property have been advanced. For instance, property is sometimes explained as a natural right. Again, in Roman law, the right of property is based on occupancy or

⁸ Fisher, Ernest M., *Advanced Principles of Real Estate Practice* (New York: The Macmillan Company, 1930), pp. 54-57.

⁹ Ely, R. T., *Property and Contract in Their Relation to the Distribution of Wealth* (New York: The Macmillan Company, 1914), vol. I, pp. 101-102.

¹⁰ Dorau, H. B., and A. G. Hinman, *Urban Land Economics* (New York: The Macmillan Company, 1928), Chaps. 16 and 17.

¹¹ Ely and Wehrwein, *op. cit.*, pp. 76-77.

seizure. Others have contended that the individual has inherent rights in that which he produces by his own labor. The theistic conception is that property is ordained by God.¹² But none of these explanations properly takes account of the evolutionary aspects of private property. They fail to recognize the fact that property and society have evolved side by side, that property has been continually reshaped to meet the changing economic and social needs of men. Thus we arrive at the social theory of property, which explains the institution as having evolved as a medium for the promotion of the general welfare. It follows, then, that since society is dynamic, so must be the institution of property, to be subjected to constant alteration as man's notions of the general welfare shift and evolve and as technological advance calls for new patterns of social organization.¹³

We are inclined to take for granted this basic institution of property, which has evolved with our economic organization and is an essential part of it. Down through the centuries, property has been molded and fitted to the needs of the social organization, needs that are ever changing through the broadening of knowledge, the surges of social movements, the slow changes in the social mind, and the advances of technology. In order to clarify the evolutionary nature of the property institution it will be well briefly to sketch its development and to illustrate the point that changes in the property concept have been associated with changes in man's way of life and with advances in technology.

Primitive man in the earliest stages subsisted by the direct appropriation of the gifts of nature in the form of game, berries, and fruits. Land had no value and belonged to no one in particular, save for an ephemeral claim that existed so long as occupancy lasted but could not be maintained against a stronger man. With the development of a crude social organization, taking the form of the clan or tribe, came the tribal sanction to the evolving notion that each individual was to be protected in the ownership of that which he had captured or made. The tribal enforcement of these rights was found to be necessary to tribal unity, but recognition was not extended beyond the possessions of those persons comprising the clan. Then came the pastoral stage and with it the beginnings of the family as a primary social unit. Land became directly productive for grazing purposes, and differences in quality came to impart special value to certain tracts. Land was no longer a free good. There arose the notion of tribal rights in areas where the herds of the clan were accustomed to graze. Boundary disputes between tribes were in themselves a recognition of tribal rights in land. But land used for

¹² Ely, *op. cit.*, vol. II, Chap. 22.

¹³ *Ibid.*, p. 546 and Chap. 6. See also Ely and Wehrwein, *op. cit.*, pp. 99-106.

pasturage, as well as the land within the communal enclosure, was the common property of the tribe, and no individual could claim any portion of it as his own.

As agriculture increased in importance, the notion already accepted in the case of personal property, to the effect that a man must be protected in what he produced, came to be applied to land. At first, however, agriculture was cooperative. Then, as the family unit became more important, temporary assignments of separate plots were made to each family, at first for one season only. Later, in recognition of a kind of equity evolving from the improvement of productivity by special skill or exceptional industry, the assignments extended over a number of crop years. The next step was the development of permanent possession vested in the patriarchal or collective family. Individual hereditary property finally evolved as the patriarchal holdings began to be split up among the sons who founded new families and as the patriarchal system of family organization declined. The institution of private property has continued to evolve from this point in its history, but the changes have been less fundamental than those which have been already outlined.¹⁴

Feudal Tenure

The major evolutionary shift in recent centuries in the institution of property was the disappearance of the feudal system of holding. In the manorial-feudal era through which the European nations passed, the ownership of all land was vested in the king. Lords of various ranks under the king were granted rights in large tracts in return for obligations and services, which usually included the provision of men and arms for the royal army. Peasants and serfs under the lords were granted limited rights in land in return for rents and services. From this system there gradually emerged our modern form of free proprietorship as the required services were converted into money rents and continuing obligations were extinguished by lump-sum payments.¹⁵

Realty, Personality, and Fixtures

Property rights imply law, for law must define property and provide the vehicle of enforcement by society. It is by this means that possession

¹⁴ Dorau and Hinman, *op. cit.*, pp. 262ff. See also: North, N. L., and D. Van Buren, *Real Estate Titles and Conveyancing* (New York: Prentice-Hall, Inc., 1927), p. 2; Laveleye, Emile De, *Primitive Property* (London: Macmillan & Co., Ltd., 1878, translated from the French by G. R. L. Marriott), pp. 3ff.; Lewinski, J., *The Origin of Property* (London: Constable & Co., Ltd., 1913); Lafargue, P., *The Evolution of Property* (Chicago: Charles H. Kerr and Company, 1910).

¹⁵ Ely and Wehrwein, *op. cit.*, p. 8.

resolves into property. It will be recalled that property in personal objects developed earlier than private ownership in land. In both cases, the basic concept of ownership was the same and probably arose for the same reasons. In the case of personal objects, there was the notion that it was mutually advantageous for all men to join in protecting the ownership of each individual in the things that he produced. In the case of land, it came to be recognized that an individual could add value to land by his efforts in grading and working the soil, draining it, or adding fertilizer, thus creating an equity to be protected by group action. Although the underlying ideas of property are similar for both personal and real property, the rules of law that have grown up about them differ in material respects. The reasons for these differences are found in the special physical and economic characteristics of the property objects. For example, land is fixed and cannot be moved or concealed, whereas most items of personal property are transportable and small enough to be hidden from sight. Again, the units of land ordinarily dealt in are of relatively great value as compared with units of personal property. In fact, in early times, most wealth was in the form of landed property. Another factor in the development of special rules for real property is found in the origins of English common law under the feudal system of land tenure, wherein land was held from an overlord whereas personal property was free of such claims.

The basic differences in the rules of law governing real property (realty) and personal property (personalty) give importance to a careful distinction between these two classes of property. A few examples of the legal effect of these differences are in point.¹⁸

1. In general, the transfer of title in real estate is by a written instrument, whereas the ownership of personalty may usually be transferred by delivery.
2. Estates of curtesy and dower apply to realty but not to personalty.
3. The rules governing the disposition of property upon the death of the owner differ substantially as between personalty and realty.
4. Creditors usually cannot levy upon realty until personalty has been exhausted.
5. The laws of the state in which realty is located govern the interests in it, whereas personalty is controlled by the laws of the state in which the owner is domiciled.

For most purposes, realty, or real estate, refers to land, buildings, and those objects which are permanently and definitely affixed thereto. All things not realty are personalty. On the border line between these two classes of property are found fixtures, articles that have the primary

¹⁸ North and Van Buren, *op. cit.*, p. 27.

characteristics of personality but which have become so much a part of the land that they have assumed the characteristics of realty. Frequent disputes arise in connection with the sale of real estate concerning whether or not certain items are rightfully a part of the property. Items that can be identified as fixtures go with the land even if not specifically mentioned in the contract or deed. For example, in the sale of a house, the question may arise as to whether or not the window shades, the refrigerator, or the awnings go with the house. Similar questions often arise between landlord and tenant, mortgagee and owner, and mortgagee and holder of a chattel mortgage.

While no inclusive rule can be stated as a basis for defining fixtures, it is generally true that the method of attachment to the land and building, the use to which the attachment is put, and the intention of the parties are the controlling considerations. As between mortgagor and mortgagee, articles are generally assumed to be a part of the property unless it was clearly not the intent of the owner. The law favors the tenant in his right to remove at the end of his lease the fixtures that he has installed such as counters, shelves, and electrical appliances, but where he has made permanent improvements the removal of which would injure the property, he may not dismantle them.¹⁷ Most of the disputes that arise in real estate transactions because of the difficulty of defining fixtures may be avoided by an adequate statement in the written instrument, contract, deed, mortgage, or lease, covering the intent of the parties with respect to every item not indisputably an integral part of the property.

Forms of Ownership

Ownership has been frequently described as a bundle of rights. In the present state of its development, the institution of private property does not permit an individual absolute and unlimited rights in land. His rights may be exclusive of other individuals, but, as we have seen, society has reserved certain rights, such as taxation and eminent domain, and exercises a control over the right of use. Thus the bundle of rights in the hands of an owner has been reduced as the concept of social obligation has expanded.

Ownership of real estate is not a simple concept, for ownership may take a number of forms. The rights comprising the complete bundle that makes up full ownership may be subdivided and the single rights or smaller groups of rights may be conveyed to other persons. Ownership may be enjoyed in the present or the future; and it may be that

¹⁷ Grange, *op. cit.*, pp. 303, 304.

the privileges are shared among two or more persons under a number of possible arrangements. In general, ownership may be said to consist of the right of use, the right of exclusion, and the right of disposition. The right of use and the right of exclusion are the bases of the right to possession, something allied to but distinct from ownership and the attribute of ownership that is the foundation of its value. We think of complete ownership as inclusive of all rights, except those reserved by the state. The subdivisions of ownership composed of single rights or groups of rights are known as "estates."¹⁸ All the legal implications of these many forms of ownership are too complicated to be considered here; the reader is referred to one of the standard works on real estate law. We shall limit our consideration to the more common forms of estates.

Fee Simple Estate. A fee simple estate is the highest form of ownership under existing law. It includes all the fundamental rights of use, exclusion, and disposition, limited only by the rights reserved to the state. In common parlance, the holder of a fee simple estate is known as the "owner," although the term is sometimes loosely used to describe the purchaser of a property where a long-term contract for deed is involved. The fee simple estate is classified by the law as a freehold estate¹⁹ and as an estate of inheritance. It is of perpetual duration, belonging to the owner and his heirs forever or until it is conveyed to another.

Life Estate. A life estate is a freehold estate not of inheritance. It creates an ownership that endures during the life of the holder, terminating at his death and either reverting to the grantor or passing to a third person, known as the "remainderman." It is important to note that the interest created by a life estate is entirely extinguished at the death of the original holder whether or not he has disposed of his interest to another. Life estates are most frequently created by will.

Estates Pur Autre Vie. An estate *pur autre vie* is a freehold estate that endures for the life of some third person, neither the grantor nor the grantee. An example is the interest in real property that is granted a husband by his father-in-law for the duration of the life of his wife.

Dower and Curtesy. The right of dower exists in its common-law form in about one-half of our states, but elsewhere it has been abolished or modified by statute. Under the original rule, a widow has a one-third interest in all the real estate which her husband owned, not only at his

¹⁸ *Ibid.*, p. 5.

¹⁹ Fisher (in his *Advanced Principles of Real Estate Practice*) defines this type of estate as that which is dependent upon the life of an individual, in contrast to the less than freehold estate, which is independent of life or lives. A freehold estate may endure for the length of a life or lives or even longer.

death but also at any time during their marriage. This right lies inchoate until the death of the husband and then becomes vested in the widow. The statutory modifications by the several states have varied both the nature and the extent of this interest.

Curtesy is the interest of a husband in the property of his wife and corresponds to the dower estate. However, it is effective only when there are children who may inherit the property. In most states curtesy has been either abolished or modified to permit a wife to sell her property without the consent of the husband.

Homestead. In some states there is provided by statute a special right vested in the owner-occupant of a home whereby the property is exempt from the claims of creditors arising from any debt except taxes. The statutes set an upper limit to the amount of this exemption.

Estate for Years. Estates for years are classified among estates less than freehold, or leasehold estates. Other common forms of leasehold estates are tenancy at will, tenancy from year to year, and tenancy by sufferance. Estates of this kind create the relationship of landlord and tenant. They involve the transfer to the tenant of only a portion of the bundle of rights, primarily the right of possession.

An estate for years is a leasehold having a definite or determinable term expressed in years or months. Where it is for more than one year it is ordinarily created by a written instrument in accordance with an almost universal statutory requirement.

Tenancy at Will. A tenancy or estate at will is the lowest form of ownership in land. The estate has no determinable duration since it may be terminated at the will of either the landlord or the tenant. The holder of such an interest has no rights that can be conveyed. This type of estate sometimes comes into being when a tenant secures possession of premises under a lease that is void under the Statute of Frauds, and where possession is continued without express agreement.

Tenancy by Sufferance. Tenancy by sufferance may arise in cases where the tenant remains in possession of premises after his original right to possession has expired, as in the case of a holdover tenant. The tenant is liable for fair value for the use of the property and may be dispossessed at the will of the landlord.

Tenancy from Year to Year. Tenancy from year to year (month to month, week to week) is an estate without a fixed duration but under an arrangement for the payment of an agreed rent per year, month, or week. The tenancy may be terminated by either landlord or tenant with proper notice as fixed by custom or statute.

Present and Future Rights. The rights that constitute ownership are always of the present, but the enjoyment of the benefits of ownership

may be either present or future. Rights providing for immediate enjoyment are known as "estates in possession," while rights providing for future enjoyment are called "estates in expectancy." Estates in expectancy may be either reversions or remainders. Reversions are rights to future enjoyment, which will revert to an owner upon the expiration of an estate in possession that he has conveyed to another. For instance, a landlord reserves the right to the use of his premises at the termination of a lease.

A remainder, like a reversion, is the right to enjoy the use of real estate after the expiration of the rights of a grantee in an estate in possession, but it is a right that vests not in the original grantor, but in a second grantee. Thus *A*, the owner of a fee, may grant an estate in possession to *B* for life, and at the same time convey to *C* a future estate to be enjoyed after the death of *B*.

Multiple Ownership. Where ownership vests in a single person, the situation is described in law as "an estate in severalty." However, the same rights may be shared by two or more persons in a number of relationships, the more important of which are known as "tenancy in common," "joint tenancy," and "tenancy by the entirety." A tenancy in common exists where two or more persons hold an undivided interest in the same estate, the interest of each individual being nearly as intensive as if he held the property in severalty. Joint tenancy differs from tenancy in common in one essential, *i.e.*, under a joint tenancy each tenant holds the right of survivorship in the shares of his co-tenants. Thus at the death of one of the joint tenants his share goes not to his heirs but to the surviving joint tenants. It is significant that the conveyance of his interest by a joint tenant converts that interest into a tenancy in common.

Tenancy by the entirety is a special form of joint tenancy used in some states only where the co-tenants are husband and wife. It differs from ordinary joint tenancy chiefly in that neither husband nor wife *alone* may convey any interest in the property.

Incorporeal Rights. There is a class of rights in real estate that are not forms of ownership, but which are rather in the nature of privileges of use of the property of another. The more important forms of these incorporeal rights are called "easement," "license," and "franchise."

An easement is a right that may be enjoyed by whoever is the owner of a parcel of real estate, known as the "dominant estate," providing for the limited use of another parcel, known as the "servient estate." The most familiar form is the right of way enjoyed by a landowner over the land of another. Easements are said to attach to the land, and any

conveyance of the dominant estate carries the easement with it for the benefit of the grantee.

A license is the right granted to an individual, for his sole benefit, to perform certain acts on the land of another, and may not be transferred. A franchise is a form of license granted by public authority for the performance of acts deemed to be of public service.

Liens. A lien is an interest in real estate that exists in favor of a creditor when real estate is used as security for a debt or for the performance of some obligation. A lien is not strictly a form of ownership but is in the nature of a financial interest in property. For instance, a mortgage made to secure a debt creates a lien on the mortgaged property, which the lender may enforce in case the terms of the loan are not met. Other liens may be imposed by law after default on an obligation, as in the case of tax liens and mechanics' liens.

Transfer of Title

It has already been explained that, in the area that was originally public domain, the chain of title for any individual tract must have originated in a public grant or patent from a state or from the Federal government. Subsequent changes in ownership might arise under various circumstances. The most common circumstance is, of course, the sale of property, in which title is passed between two living persons by private grant. However, ownership may also change by descent or devise in case of the death of the owner. Under certain conditions rights approaching full ownership may be acquired by adverse possession where the owner ceases to assert his ownership.

In the case of conveyance of title by private grant, title is passed by the use of a legal instrument known as a "deed." The deed records the names of the grantor and grantee, contains "operative words of conveyance," and describes the property so that it can be identified with no question. Deeds must be properly executed and acknowledged in accordance with statutory requirements. The most common form of deed is known as a "warranty deed," which contains wording stating that the grantor guarantees his ownership, his right to convey title, and the freedom of the property from liens and encumbrances except those mentioned in the instrument itself. The grantor guarantees that the grantee shall not be disturbed in his ownership by anyone who may be able to prove a paramount title. Other types of deed are sometimes used under different circumstances, such as the "quitclaim deed" which contains no warranty but simply conveys to the grantee only those rights which the grantor may possess at the time of the conveyance. Sheriff's deeds are used in the case of foreclosures and transfer to the

grantee only those interests with which the official proceedings have been concerned.²⁰

Public Records of Ownership

The statutes in all states require the recording of all instruments affecting the title to real estate. Thus, deeds must be recorded in order to be valid, as well as other legal instruments that encumber or affect title, such as mortgages and liens. There is provided in each jurisdiction an office of public record usually located in the county courthouse and administered by an officer known as the "County Recorder" or "Register of Deeds." It is possible to trace back the chain of title to any property by reference to the instruments copied into the public records. The origin and disposition of all interests are indicated and a complete history of the ownership of the property can be prepared. By this procedure it is possible to determine whether the title to a property is clear or whether it is imperfect or defective because of past interests that have not been satisfied.

Limitations on Private Property

We have considered the development of private property in land as a facilitating instrumentality of economic activity, as an institution evolved to implement wealth-getting and wealth-spending transactions. But in this process of evolution, society has found it advisable to establish certain limitations upon private property, to enforce regulations and restrictions that inhibit those private actions which may result in social harm. The power of property has been made exclusive but not absolute.²¹ Recent changes in the institution of property have taken the form of broadening limitations on the use of property through the exercise of the reserved powers of the state.

While, in general, our Federal and state constitutions define and protect private property and tend to perpetuate this institution in its modern form, there exists legal machinery for altering private property in the social interest. The power of government to regulate the use of private property has been reserved through specific provisions in our constitutions—provision for taxing property for public purposes and thus limiting the benefits of ownership, provision known as "eminent domain" for the taking of property for a public use with just compensation, and, finally, a general provision termed "police power" for controlling the property object in its relationship to society so that its use may be consonant

²⁰ Fisher, *op. cit.*, p. 62.

²¹ Dorau and Hinman, *op. cit.*, Chaps. 16 and 17, present the social theory of property and give methods of social control over land utilization.

with the general welfare. The courts are the instrumentalities for the interpretation of these constitutional provisions. And it is through the changing judicial definitions of "public purpose" and "general welfare" that the institution of property is molded to accord with shifting and expanding social objectives.

Police Power. Until the last few decades the police power was used only to restrict or suppress the uses or attributes of property that were considered to be detrimental to the public welfare. The courts were willing to accept, as in the public interest, legislation prohibiting the use of land to create a public nuisance or tending to endanger health and safety. But during recent years the interpretation of the public welfare has been expanded to approve of a more positive regulation of property through laws that determine within rather narrow limits the use to which land may be put. Through a series of evolutionary steps the police power has become the basis for the regulation of building methods and materials through building ordinances and for the control of land use through zoning, subdivision, and planning regulations.

Regulation based upon the police power may not be applied except for the general welfare and in the interests of the public health, safety, and morals; and there need be no public compensation to the owners of the properties affected. In the end, it is the courts that establish limits to the police power in the process of judicial review of legislative action. The courts are called upon to make distinction between those permissible burdens on property which are of general social benefit and hence not compensable, and those burdens which either constitute the taking of property for a public purpose and require compensation or are of such limited benefit as to be indefensible.

There is a school of thought which holds that the use of land, particularly in urban areas, is so broadly vested with the public interest that it should be regulated as a public utility. Others favor the outright public ownership of all urban land so that its development and redevelopment may be closely controlled for the benefit of the community as a whole. It is not uncommon for European cities to acquire large tracts of peripheral agricultural land in order to control its development as it ripens for urban use, but in this country such a practice would be of doubtful constitutionality. We are still far removed from a general acceptance of a system of public control that would regulate the rate of improvement of vacant land or the price to be charged for the services of real estate. Police powers as presently interpreted are adequate to control the orderly arrangement of land use in areas of new urban growth, although the rate of growth is not controlled. The unfortunate fact is that the available powers are not used in many of those suburban political subdivisions

where subdividing and new construction are creating the cities of the future.

Eminent Domain. The power of eminent domain has been reserved by society in order to ensure that public agencies may acquire the land that is needed for various public purposes. The acquired property must be destined for use by a public agency and a just compensation is paid to the owner for the property rights of which he is deprived. This situation is in contrast to the expropriation of rights under the police power, where no compensation is made and no public use made of the rights withdrawn. Governmental agencies resort to the power of eminent domain to acquire land for public buildings, parks, streets, and other public uses. This power is sometimes granted by the states to public utilities, such as railroads, when it can be demonstrated that benefits will redound to the public.

In recent years, the power of eminent domain has been extended by judicial interpretation to include the right to condemn more property than is actually required for the public use that is contemplated. This power, known as "excess condemnation," is justified as a means of solving the problem of odd-shaped lot remnants such as might be created in widening a street or cutting a new street through previously subdivided territory.²² The acquisition of excess land contiguous to the improvement permits replotting to fit the changed situation and avoids fragmentary lots that are not usable. In some cases excess land may be necessary to protect or enhance the beauty of public improvements. Finally, excess condemnation permits the governmental unit to assist in financing the development by the resale of the surplus area and thus to benefit from any increase in land values resulting from the improvements.

Under the power of eminent domain, rights in property are acquired by governmental authorities for public use through a court action known as "condemnation proceedings." The rights taken may be full ownership or some lesser though substantial right such as an easement. In some states only the right of use of the property may be taken, the title remaining vested in the owner. Thus when the public use is abandoned, the physical possession reverts to the titleholder.

Although the procedure varies between states, it may be said that both the right of the condemnor to acquire the property and the amount of the damages due the owner are matters of judicial determination. In determining the right to condemn, the issue is whether or not the use proposed for the property is a public use. Thus, as in the case of the police power, the limits of eminent domain are determined by the courts in the

²² Dorau and Hinman, *op. cit.*, p. 274.

defining of a public use. The boundaries of private property, therefore, may be varied indefinitely as a result of a changing judicial viewpoint on the proper limits of governmental activity.²³

The amount of the award to be paid the owner of a condemned property is determined by the court, or an appointee of the court, after an opportunity has been given both the owner and the condemnor to present evidence and witnesses as to the value of the real estate. In general, market value has been accepted as the basis for the award, although courts differ in their definition of market value. Where only part of the property is condemned, the award is based on the difference between the value of the entire property and that part to remain in the hands of the owner.

Taxation. The power of taxing real estate to meet the costs of government has been reserved by the states and has been delegated to their political subdivisions. Taxation constitutes an important restriction on private property in land as a limitation on the benefits of ownership. In extreme cases, taxes that absorb the entire income produced by real estate effect a virtual confiscation of private property. Taxation may be used as an instrument of public policy in influencing the use of land. For instance, a burdensome tax on vacant land may hasten its improvement; tax exemption on new structures may stimulate building; in New Zealand a graduated land tax was adopted in an effort to break up large estates.²⁴

²³ Grange, *op. cit.*, p. 389.

²⁴ Ely and Wehrwein, *op. cit.*, p. 111.

CHAPTER 2

THE ECONOMICS OF URBANIZATION

As a background for the study of the demand for urban land, we shall need to consider the basic forces that underlie urban organization—the social, economic, and technical factors that have joined in the creation of cities and which are responsible for their growing importance in our national life. We shall consider the city as an economic mechanism that has evolved in response to the ever-changing economic needs of society in the production, consumption, and distribution of goods and services. Not all the factors that affect the demand for real estate are economic, however. Social factors must also be considered; in Chap. 3 we shall examine the city as a social complex in order to learn of the characteristics of the people who inhabit cities, and to study the urban way of life as it may affect the demand for land.

After dealing with the general economic and social forces of demand, we shall be ready to turn to a more definite analysis of each of the several types of demand for the services of land. These types include the demand for residential use, for retailing, wholesaling, manufacturing, and recreational use, and for public use.

Analysis of the geographical distribution of urban land uses will be reserved for special attention in a later section, for the forces of demand constitute only one of a number of sets of factors that share in determining the urban land use structure. Factors of production and of social control also must be considered before we are ready to study the composite effect of all the active forces that influence land utilization.

The history of the world, to a considerable extent, is the history of cities. From the early days of civilization, cities have been the centers of political power, the seats of religious influence, and the focus of the development of science and art. Trade in the ancient world centered in the great Mediterranean seaports, which rose and fell in supremacy and power as their military might mounted and waned. In later times, the cities of the Hanseatic League became dominant in their sphere and the

economic dominion of England had its focus at the Port of London. Cities have been the magnetic poles to which have flowed goods and wealth from tributary areas and to which have been attracted the most able, the most energetic, and the most ambitious of the population. From the cities of the world there have emanated the dominating influences of civilization. Political, military, economic, and cultural power has reached out from a single city, as Rome or London, into the far corners of the world; and trade has been the traveling companion of power. The cultural influences of cities have molded world society.

The history of civilization is a history not only of growing dominance of cities, but also of an increasing proportion of the population living in cities. Before the Industrial Revolution, this rate of increase was moderate and irregular, but the development of factory techniques of production brought sharp increases in the urban population. In the United States, urban growth was more rapid than in the European nations, which emerged more gradually from the town economy of the Middle Ages to modern industrial urbanism.¹

The Functional Basis of the Urban Economy

The explanation of the urban organization of society will be found in the socioeconomic activities that require the concentration of people, buildings, and machines within relatively small areas. The demand for urban land arises from the need for appropriate space for the performance of these activities. Thus, as a first step in the analysis of demand, we shall need to identify the functions that are characteristically urban. Our approach will be historical, tracing the interactions of the economic, social, and technical forces that have joined in changing society from predominantly rural to predominantly urban. When we understand why we have cities, we shall be able to determine what economic and social functions are concentrated in them and to identify the basic forces of demand for the services of urban real estate. We shall see that the particular manner in which the combination of these factors impinges upon each urban area determines its economic and social characteristics and its rate of growth. In a later discussion we shall deal with the city as an economic mechanism in which the spatial distribution of the various land uses is determined by the functions to be performed and by the competition of these land uses in the real estate market.

The process of urbanization has been complex, but the basic forces can be readily identified. In general, the change from a rural to a predominantly urban mode of living has been the accompaniment of a change from a simple handicraft economy to an advanced type of modern industrial-

¹ National Resources Committee, *Our Cities* (Washington, D.C.: U.S. Government Printing Office, 1937), p. 26.

ism.² In a sense, cities have developed as integral parts of the productive and distributive machinery. The spatial pattern of functional areas, the street system, and the buildings that crowd the landscape, together with the people who inhabit and use them, exist as a part of the economic equipment. It is true that our cities have not had the benefit of the skilled planning that has produced efficient machines and factories. But though this lack of control and the absence of conscious design have given rise to many inefficiencies in their operation as parts of the productive and distributive machinery, it remains that the basic urban form is essentially functional.

Early Urban Forms. A brief view of the nature and functions of cities in the medieval era, prior to the emergence of an industrial economy, will aid in understanding the functional nature of urban organization and how it reflects the cultural characteristics of the contemporary society. Medieval cities were not unique in the supplying of a basic need which is found in even the most rudimentary forms of social groupings—the need for a place of assembly. Not only is man a gregarious creature, finding pleasure and comfort in group contacts, but even the most simple form of communal organization calls for an established place for governmental and judicial gatherings. Closely associated with these needs is the need for a central shrine for the conduct of group religious rites.³

Another fundamental need, at least until the development of modern methods of warfare, was a site appropriate for defense against the common enemy. From early times, the city had functioned as a fortress, and among the first substantial structures to be built were protecting walls against the enemy. Thus all early city forms were enclosed, originally serving primarily as places of assembly and retreat, and not until later developing as places of permanent residence and trade.⁴ But as civilization progressed and cultural institutions solidified, the functions of the places of assembly and defense were extended to include the locus of the temple and the homes of priests, magistrates, and artisans.

After the fall of the Roman Empire, the castle and the cathedral or monastery were nuclei for town formation.⁵ The concentrations about the castles arose through the need for homes for the soldiers, the weapon makers, and the other craftsmen who served the lord and his men. The

² *Ibid.*, p. 1.

³ Pirenne, Henri, *Medieval Cities: Their Origin and the Revival of Trade* (Princeton, N.J.: Princeton University Press, 1925), pp. 56-57.

⁴ This statement applies generally to the acropolises of the Greeks, the *oppida* of the Etruscans, the Latins, and the Gauls, the *burgen* of the Germans, the *gorods* of the Slavs, and the *kraals* of the South African Negroes.

⁵ Smith, Adam, *The Wealth of Nations* (New York: Modern Library, Inc.), Book III, Chap. 3, p. 373.

castle chapel served as a parish church, and the castle walls provided refuge against the enemy. The castle was the administrative and political center of the area.⁶

The pervasive influence of religious life and ecclesiastical organization in the Middle Ages led to urbanlike developments around the numerous cathedrals and monasteries.⁷ The prestige of the bishops during this period gave great importance to their places of residence; furthermore, the diocese was an important administrative unit. The town was made up of the various religious establishments, structures for the priests, the scholars and students in ecclesiastical schools, servitors, and artisans. There were also found storehouses and granaries for the harvests of the tenant farmers of the demesne. These religious centers were often fortified. All the towns of this period served as the location for weekly markets to which the peasants of the surrounding areas brought their produce.

The medieval fortress town is described by one writer as a

. . . walled enclosure of somewhat restricted perimeter, customarily circular in form and surrounded by a moat. In the center was to be found a strong tower and a keep, the last redoubt of defense in case of attack. A permanent garrison of knights was kept stationed there. . . . The prince had a house in each of the burghs of his territory, where he stayed with his retinue in the course of the continual changes of residence which war or administrative duties forced upon him. Very often a chapel, or a church, flanked by the buildings necessary to house the clergy, raised its belfry above the battlements of the rampart. Sometimes there were also to be found by the side of it quarters intended for the judicial assemblies whose members came, at fixed periods, from outside to assemble in the burgh. Finally, what was never lacking were a granary and cellars where were kept, to supply the necessities of a siege should the case arise and to furnish subsistence to the prince during his stays, the produce of the neighboring demesnes.⁸

Such a center

. . . produced nothing of itself, lived by revenue from the surrounding country, and had no other economic role than that of a simple consumer. . . . The towns and burghs were merely fortified places and headquarters of administration. Their inhabitants enjoyed neither special laws nor institutions of their own, and their manner of living did not distinguish them from the rest of society.⁹

This discussion of the medieval town, sketchy though it has been, serves to demonstrate that the existence and the form of the town were the

⁶ Ashley, W. J., "The Beginnings of Town Life in the Middle Ages," *Quarterly Journal of Economics*, vol. X, p. 373, July, 1896.

⁷ Pirenne, *op. cit.*, p. 66.

⁸ *Ibid.*, p. 74.

⁹ *Ibid.*, p. 76.

direct reflections of the cultural characteristics of the times. This point might be further illustrated by the transformations that occurred in western Europe during the twelfth century. During this era, commerce and handicraft industry took their places with agriculture and, together, these activities began to replace warfare and religion as the major pre-occupations of society. Agricultural products were used more extensively as objects of barter or as the raw materials of manufacture. One historian comments on these changes as follows:

Under the influence of trade, the old Roman cities took on new life and were repopulated, or mercantile groups formed round about the military burgs and established themselves along the sea coasts, on river banks, at confluences, at the junction points of the natural routes of communication. Each of them constituted a market which exercised an attraction, proportionate to its importance, on the surrounding country or made itself felt afar.¹⁰

We have, in this period of European history, the broadening of the foundations of the present interdependent world economy reflecting a pervasive specialization of men and machines, cities and regions. In this period, there developed the strong interdependence of city and country,

. . . the country attending to the provisioning of the towns, and the towns, supplying, in return, articles of commerce and manufactured goods. The physical life of the burgher depended upon the peasant, but the social life of the peasant depended upon the burgher. For the burgher revealed to him a more comfortable sort of existence, a more refined sort, and one which, in arousing his desires, multiplied his needs and raised his standard of living.¹¹

The handicraft manufacturing of the times developed with the proliferation of individual skills and the specialized production of various towns and regions. Without the concomitant development of the machinery of trade, no such specialization could have occurred. It is evident that trade and specialization were fundamental forces in the important cultural changes of the times which led to the growth of cities as integral, functioning parts of the social and economic system. Because of the changes in the activities carried on in the urban areas, the form of the town changed and adapted itself to its new functions. The houses and shops of the artisans and tradesmen could no longer be contained within the walls and burst out beyond them into the surrounding countryside. The marketplace, as well as the castle and the cathedral, became a focus of interest and activity.

This brief historical treatment of urban functionalism has served to

¹⁰ *Ibid.*, p. 104.

¹¹ *Ibid.*, pp. 105-106.

lead us into a more detailed consideration of the basic forces of agglomeration that have been revealed—trade and the division of labor.

Exchange as an Urbanizing Force. The familiar evidence of history, which reveals that the great cities of the ancient world were largely centers of transport and trade, strongly suggests the importance of exchange as an urbanizing force. By the term "urbanizing force" we simply mean a function that requires for its performance the geographical concentration of people and appropriate facilities. Trade and transport have long been city builders, and we must explore the reasons behind this relationship.

In the ancient world, trade was largely in the nature of an exchange of various raw materials among the territories of their extraction and to a much lesser extent the exchange of raw materials for manufactured and processed goods. This type of trade was based on territorial specialization in those regions of the known world which were served by transport facilities. The cities of the times were most often situated on good harbors or on inland water routes; they were the loci of docks and shipyards and the homes of captains and sailors. The merchants also found it most convenient to live at these transport nodes, as did the moneylenders who financed trading expeditions or provided working capital for the merchants. Storage facilities were required as well as inns for the traders from the hinterland. The military establishments of the times, particularly the naval bases, were located in these trading centers, and, because of their strategic position, they often served as political capitals.

It is apparent that historically cities have developed as integral parts of the machinery of exchange. Trade requires the concentration of certain facilities and of man power. Even in its simplest form, trade involves the physical movement of goods; thus transportation and trade are inseparable. The facilities of exchange tend to concentrate at points of transshipment, at the intersections of major transport routes, and at terminal points of communication. Whether the method of transportation be ship, airplane, railroad, or camel caravan, physical facilities and man power are required for the servicing of the transport equipment, for the unloading and loading of goods, for sorting and storing, and for the conduct of the merchants' business. In addition, there are essential auxiliary services, such as financing and insuring, which bring together still more people.

Specialization and trade are associated phenomena. In the early centuries of the civilized world, specialization was largely territorial and trade was mainly in raw materials among the areas of their origins. Another early development based on specialization was the exchange of foodstuffs for processed goods between town and country. As the handicraft economy took form and as the number of individual skills multi-

plied and the variety of manufactured products increased, there was a corresponding expansion of trade and a necessary increase in the concentrations of the complementary facilities of exchange.

This discussion has been a demonstration of the fundamental economic principle that specialization of productive activity creates an interdependence that necessitates the exchange of goods and services. Not only does the exchange process give rise to urban concentrations, where the machinery of trade is assembled, but another agglomerative force derives from the fact that those persons and groups who are interdependent and must exchange goods and services find it most convenient to live and work near one another so that exchange may be most efficiently and most expeditiously effected. Another advantage in the proximity of the various specialists is that a greater variety of goods and services becomes available for exchange. As the division of labor is extended, so must be the market in order to absorb the fruits of increased productivity; and as the market is extended, so must there be an expansion of the machinery of trade and transport at strategic locations. Thus specialization, trade, and urbanization move forward hand in hand.

Manufacturing and Urbanism. It is largely true that, up to the Industrial Revolution, trade was the primary urbanizing factor. In addition, of course, cities were founded at religious shrines or as memorials. Other settlements might be found at the sources of raw materials. But manufacturing and the processing of the fruits of the earth were of minor consequence in the development of urbanism. During the Middle Ages, with the development of the guild system, cities became more important as manufacturing centers and there was an increase in local specialization of product. But it was the spread of machine methods, the vast acceleration in the division of labor that resulted, and large-scale, factory production that, following the Industrial Revolution, became the primary forces leading to urban expansion. At the same time, with increasing production in quantity and variety of product, came correspondingly increased facilities for trade.

The development of large-scale production and progress in the division of labor have gone hand in hand. It is true that specialization of economic functions was advancing slowly before the Industrial Revolution. The moderate division of labor that had occurred came about through the improvement and complication of handicraft methods, the development or discovery of new products, and, as a consequence, natural aptitudes and interests that led individuals to devote themselves exclusively to special tasks. But the rapid spread of factory methods during the last hundred years has created a high degree of technical division of labor and has heightened the occupational and territorial specialization that has

been developing.¹² It has been pointed out that the Industrial Revolution was not alone a matter of new machinery of production; there was also a cheapening of transportation costs, the use of coal as fuel, and the removal of trade barriers, freeing industries to locate where it was most economically advantageous for them to do so.¹³

It is readily observable that modern manufacturing methods involve large-scale production, which, in turn, brings together large numbers of people and vast physical facilities. It is also observable that manufacturing plants of various kinds and sizes are often found in groups. It will be well to understand some of the reasons back of these phenomena.

The economies of large-scale production are well known, but a brief review will be useful. Alfred Marshall assigns three main advantages to large-scale production: economy of skill, economy of machinery, and economy of materials.¹⁴ A large-scale plant can obtain economies of skill by continuing to keep each of its employees constantly engaged in the most difficult work of which he is capable, and yet so to narrow the range of his work that he can attain the facility and excellence that come from long-continued practice. A small business is under a disadvantage because of the growing variety and expensiveness of machinery. In a large establishment there are many expensive machines each made for one small use. The third economy that Marshall mentions comes about because a large business can buy its raw materials in great quantities and therefore more cheaply than a smaller sized plant. A large-scale enterprise can buy raw materials in the cheapest market and at the most profitable time and store them until needed; it can also hold its finished product until the most favorable opportunity for sale arises. Because a large-scale plant buys and sells in large quantities it gains the advantage of lower transportation costs. Again, a large-scale plant can attain economies of motive power and in maintenance of plant. It can attain savings in wages by securing the most extensive division of labor and by employing the most highly specialized ability. And only a large-scale organization can attain economies in the utilization of by-products that become profitable to handle only in large quantities.¹⁵ Savings can also accrue to a large plant in obtaining credit.¹⁶

¹² Dorau, H. B., and A. G. Hinman, *Urban Land Economics* (New York: The Macmillan Company, 1928), p. 28.

¹³ Hoover, Edgar M., *Location Theory and the Shoe and Leather Industries* (Cambridge, Mass.: Harvard University Press, 1937).

¹⁴ Marshall, Alfred, *Principles of Economics* (London: Macmillan and Company, Ltd., 8th ed., 1930), Book IV, Chap. 11, pp. 278-290.

¹⁵ Weber, Adna F., *The Growth of Cities in the Nineteenth Century* (New York: The Macmillan Company, 1929), pp. 194-196.

¹⁶ Weber, Alfred, *Theory of the Location of Industries*, ed. by Carl Joachim Friedrich (Chicago: University of Chicago Press, 1929), p. 127.

In addition to the advantages of large-scale production, there are advantages in the geographical concentrating of manufacturing activity. The local aggregation of several plants carries still further the advantages of the large-scale plant.¹⁷ In some industries, the development of specialized machines and processes is carried to a point where such machines and processes become the basis for auxiliary industries serving many plants with a specialized type of service, which even the larger establishments find it economical to farm out. The automobile industry in the Detroit area is a good example of the extensive development of small parts plants, each one turning out one small item, which can be sold to several automobile manufacturers for less than it would cost to make in their own plants.

The local concentration of industry offers advantages in the greater facility for replacing and repairing machinery. Furthermore, technological refinements and improvements in manufacturing methods come about more easily through the interchange of information and the mobility of technicians and skilled workers. There is a tendency for production methods to be more rapidly leveled up to the best known techniques. Inventive talent is stimulated and more highly skilled professional technicians appear to serve the various industries.

With respect to the labor force, there are advantages in industrial concentrations. New industries find it easier to get under way in areas where there is already a supply of trained workers. A large industrial community will provide all levels of skill in the labor force and thus attract many different types of industry. It has been noted that light industries that can utilize female labor often grow up in the vicinity of heavy industries and employ the wives and daughters of the men engaged in primary production or extraction activities. The utilization of this productive energy contributes further to the advantages of concentration, since it probably tends to keep down labor costs in the primary activity in which the family heads are engaged.¹⁸

Once a particular type of industry has become entrenched in an area, there are factors at work that lead to still further concentration. Among these factors are the general advantages of industrial concentration, which have already been discussed.¹⁹ Local capital is more readily available because of the familiarity of bankers with the business. A trained labor force is at hand; the local transportation facilities are geared to the industry and familiar with its needs; the industry is assured of sup-

¹⁷ *Ibid.*, pp. 128-130.

¹⁸ Haig, R. M., "Toward an Understanding of the Metropolis," *Quarterly Journal of Economics*, vol. XL, pp. 179-208, 1926.

¹⁹ Ross, E. A., "The Location of Industries," *Quarterly Journal of Economics*, vol. 10, pp. 262-263, April, 1896.

port by a community that is intimately familiar with its problems; engineering and managerial talent bred in the industry is at hand; from a marketing viewpoint, the prestige of a location in the acknowledged center of the industry is a valuable asset; finally, the area where the productive facilities of the industry are concentrated offers many advantages for distribution of the product in the form of established channels and auxiliary marketing services.

Steam and Transportation. The use of steam power for manufacturing and the improvements in transportation and communication have been strong forces in the process of urbanization. Steam power is most cheaply generated in large quantities and must be used close to the point of production. Thus, before the development of methods of transmission for electrical power, manufacturing plants were necessarily grouped closely about the power source.

Centralization of manufacturing and distribution could never have occurred without the parallel development of improved methods of transportation, on the one hand, while, on the other, the limited nature of the facilities available in the past favored the concentration of industry and commerce in a circumscribed physical territory. There is no need to retell the story of the rapid strides in water, rail, highway, and air transport, for it is a well-worn tale. Rapid transport, reduced costs of carriage, and the interlacing of transportation lines in more modern times have made possible a wide physical separation between the point of extraction of raw materials, the point of fabrication, and the point of final consumption. Although these advances have permitted a wider territorial separation of producing and distributing functions, they have also contributed to specialization and the division of labor as well as to the mobility of labor. Thus in selecting locations it is possible for industry to give less weight to convenience to the market and more consideration to the lower manufacturing costs that could be attained, for example, by use of water power or local pools of labor. As Hoover puts it, "the effect of all-round cheaper transfer is to give greater locational influence to differences in processing costs."²⁰ And again, with cheaper transportation costs,

. . . Industries distributing to relatively scattered markets find they can now serve them just as well from a greater distance and concentrate their operations in fewer, larger, and more efficient processing units, each with a larger market area. Correspondingly, industries collecting materials from relatively scattered sources now find it possible to concentrate processing operations in fewer, larger, and more efficient units, each with a larger supply area. Any particular com-

²⁰ Hoover, Edgar M., *The Location of Economic Activity* (New York: McGraw-Hill Book Company, Inc., 1948), Chap. 10, p. 167.

munity or region becomes less self-sufficient, and interregional trade grows on the basis of specialization according to processing advantages.²¹

Thus, cheaper transfer costs may contribute to the further concentration of a given industry in areas that are particularly economical for its operations.

Developments in intracity transportation have been nearly as important as the improvements on intercity transport. Without the facilities of street railway, bus, and private car, the frictions created by the mass movements of men and goods within the city would have prevented the development of cities of the degree of size, complexity, and efficiency that characterize our economy.

Ancillary Urban Activities. The activities of man that are fundamental as agglomerative forces in the formation of cities are those which we have already considered—extraction, manufacturing, and trade. But wherever these forces or any other primary forces have brought settlements into being, there will appear a complement of other activities, which in varying ways and degrees will contribute as urbanizing factors.

FINANCE. The large-scale operations of production and trade that characterize the city have been facilitated by developments in financial methods and institutions. Cities early became the centers of finance and the loci of the banking function. The concentration of accumulated capital seeking investment materially aided the founding of new enterprises and the expansion of going concerns. Facilities were developed for the financing of both small- and large-scale trading operations, and investment markets developed in the form of stock and bond exchanges.

OTHER BUSINESS FUNCTIONS. The city, as the center of manufacturing and distribution and as the point of convergence of lines of communication and transportation, is the natural locus for a number of facilitating business functions that are separated from the physical aspects of production and trade. Thus, in the performance of the functions of managing and administering, the corporate headquarters of far-flung business organizations are located in the huge office buildings of large cities. Here also are situated factors and agents who buy and sell goods without physical possession. The risk-bearing function is performed by insurance organizations, and investigating, advising, and record-keeping services are offered by business consultants, investment counsels, statisticians, lawyers, and accountants.²²

²¹ *Ibid.*, pp. 167-168.

²² Haig, R. M., *Major Economic Factors in Metropolitan Growth and Arrangement* (New York: Regional Plan Association, 1927), vol. I, p. 23.

SERVICES. There has grown up an increasing number of specialized personal services offered to urban residents on a commercial basis. In the professional field there are doctors and dentists, architects and engineers, photographers and nurses. At a somewhat different level are barbers and bootblacks, janitors and domestic servants. Laundries, dry-cleaning establishments, and restaurants offer relief for a price to the tired housewife.

RECREATIONAL, POLITICAL, AND RELIGIOUS ACTIVITIES. There have grown up in our urban areas a wide variety of secondary activities not directly associated with production or trade. These activities have developed to serve social needs and as manifestations of the rising standard of living in cities. Recreational facilities have been provided in the form of parks, playgrounds, and theaters. Governmental activities have been increasing in number and complexity and include education, fire protection, police service, public-health control, and the administration of numberless ordinances and regulations. Churches and their staffs serve the religious needs of the community.

Agricultural Surplus. Had it not been for tremendous advances in agricultural productivity, huge aggregations of people divorced from the soil would have been impossible. Cities are made up of persons who do not cultivate the soil; the very existence of these people presupposes a surplus food supply, which, in turn, assumes both a great fertility in the soil and an advanced stage of the agricultural arts.²³ The great city is a community that is dependent upon the exchange of the goods and services produced in it for the products of the soil. It is a historical fact that improved methods of farming and the widespread use of machinery have produced a vast excess of food above the requirements of the farm population, which has been sufficient to feed the rapidly growing urban population. The division of labor between the city and the country has resulted in workers on the soil whose increased specialization has made them more efficient producers. The increased use of fertilizers, the development of highly scientific methods of production, and the extension of the transportation system have permitted the opening of distant and virgin fields.²⁴

The agricultural surplus not only enabled a population divorced from the soil to arise, but, according to one writer, resulted in forcing people away from the soil. As this writer puts it,

When the rural population has once become sufficiently numerous to carry on cultivation in the most profitable way, all further growth becomes disadvantage-

²³ Weber, Adna, *op. cit.*, p. 162.

²⁴ *Ibid.*

ous; whereas the materials with which the varied manufacturers deal are practically unlimited in amount and there is no other check to possible growth to such industries than the difficulty of finding markets for their products.²⁵

Thus, increased agricultural efficiency released man power, which was recruited for urban service.²⁶

The importance of increased productivity in the development of urbanism does not end here, however. For the increased productivity in agriculture caused a decline in the prices of farm products and a reduced income for farmers. The results of this fall in income were a decrease in economic opportunities in rural areas and an impetus to rural migration into the city. A positive economic pressure on rural families to move to the cities in the hope of making a better living thus emerged.²⁷

Table 1 indicates the development of productivity in agriculture in more recent times.

TABLE 1. INDEXES OF AGRICULTURAL PRODUCTIVITY *

Year	Total output	Employment	Output per worker	Per cent change in output per worker in each decade
1870	100	100	100	20
1880	150	125	120	9
1890	189	145	130	15
1900	238	159	149	8
1910	273	169	162	11
1920	299	167	179	26
1930	345	153	225	26
1940	379	134	284	..
				Mean: 16

* Barger, Harold, and Hans H. Landsberg, *American Agriculture, 1880-1939* (New York: National Bureau of Economic Research, Inc., 1942), p. 253.

Using 1870 as a base, total output increased from 100 in 1870 to 379 in 1940, and output per worker increased from 100 in 1870 to 284 in 1940. The table also indicates that the greatest rises in productivity took place between 1910 and 1930.

²⁵ Ernie, Rowland Edmond Prothero, *The Pioneers and Progress of English Farming* (New York: Longmans, Green & Co., Inc., 1888), p. 38.

²⁶ Dorau and Hinman, *op. cit.*, pp. 22ff.

²⁷ Gist and Halbert, *Urban Society* (New York: The Thomas Y. Crowell Company, 1933), p. 93.

The degree to which man power and horsepower have been replaced by mechanized equipment is indicated by the fact that, while there were only about 1,000 tractors on American farms in 1910, this number steadily increased until by 1942 there were about 1,880,000 tractors in use. Similarly, the use of trucks on American farms increased from only 2,000 in 1911 to 935,000 in 1940; the number of automobiles used on the farm increased from 50,000 in 1910 to 4,185,000 in 1940.²⁸

Sanitation. Modern sanitation is an essential condition to the existence of our modern cities. Ancient and medieval cities were noisome and unhealthy, with death rates so high that the cities were maintained only by extensive immigration from rural areas to replace the victims of contagious disease and lack of medical care. The modern city is only possible because of modern medicine and sanitation.

Life for masses of people spacially removed from and yet closely dependent upon a constant supply of water, food, fuel, and raw materials is in itself conditioned by a high degree of technological development and the perfection of administrative organization. But the task of conquering the hazards of life among a vast congested population, such as inhabits a great city, in the face of disease, can be appreciated better if we consider that before the advent of modern sanitation the deaths in cities of the Western world exceeded the births by a considerable margin. . . . The ample provision of pure water, the perfection of centralized sewerage and waste disposal systems, the insurance of a safe food supply, and the prevention and control of contagious diseases are the chief measures that for more than a century have made it possible for most Western cities to maintain population by lowering the death rate.²⁹

Pure water in adequate quantity is a fairly recent development. The general use of gas and electricity for street lighting and home use began within the memory of living men. Sewage collection and disposal is so recent that a substantial proportion of urban dwellings are not yet connected with the public system. Where contagious diseases wiped out whole populations in the medieval period, public-health practices, sanitary codes, and rules of quarantine in more recent times have sought to control contagious diseases and have succeeded to a large extent. Modern fire protection through building codes and efficient fire-fighting equipment have all but removed the danger of general conflagrations. Thus, modern techniques that are so new that they have been generally employed in only the progressive, industrial nations of the world have made possible

²⁸ Barger, Harold, and Hans H. Landsberg, *American Agriculture, 1899-1939* (New York: National Bureau of Economic Research, Inc., 1942), p. 204.

²⁹ National Resources Committee, *op. cit.*, p. 31.

that concentration of population in cities which is the natural development of our evolving economy.³⁰

Location of Cities

An analysis of the factors that determine the location of cities will throw further light on the functional basis of the urban economy. Geography, of course, has had much to do with the location of industry and commerce and thus with the pattern of settlement. On this point Alfred Marshall has written, "Many various causes have led to the localization of industries; but the chief causes have been physical conditions, such as the character of the climate and the soil, the existence of mines and quarries in the neighborhood, or within easy access by land or water."³¹ Adam Smith recognized the relationship of geographical location and the growth of industry and commerce when he wrote

. . . (the inhabitants) of a city, situated near either the seacoast or the bank of a navigable river, are not necessarily confined to derive (their subsistence and the whole materials and means of their industry) from the country in their neighborhood. They have a much wider range, and may draw them from the most remote corners of the world, either in exchange for manufactured produce of their own industry, or by performing the office of carriers between distant countries, and exchanging the produce of one for that of another. A city might in this manner grow up to great wealth and splendor, while not only the country in its neighborhood, but all those to which it traded, were in poverty and wretchedness.³²

In the preindustrial period, when wars swept the lands and life was cheap, those localities prospered which were favorable to defense. Many Greek colonies were located on a promontory or an island; the Etruscan cities were located on hilltops; and thus we can partially account for Athens and the Acropolis, Rome on its seven hills, Paris on an island, and London in the swamps.³³

When trade began to assume a predominant role in society, those areas were favored which were located at breaks in transportation along the lines of communication between the sources of products and their final markets. Settlements were usually situated at the following points:³⁴

³⁰ Ely, R. T., and G. S. Wehrwein, *Land Economics* (New York: The Macmillan Company, 1940), pp. 415-417.

³¹ Marshall, *op. cit.*, p. 268.

³² Smith, *op. cit.*, Book III, Chap. 3, p. 379.

³³ Hurd, Richard M., *Principles of City Land Values* (New York: The Record and Guide, 1924), p. 22.

³⁴ *Ibid.*, pp. 22-24.

1. Where oceans or other navigable bodies of water met land.
2. At "breaks" in mountain chains.
3. Where ocean and river or other navigable water bodies met or crossed.
4. At obstructions in the river requiring unloading.
5. At intersections of land trade routes.
6. At points where the type of transportation used required servicing.
7. Where the mountain met the plain.
8. Where there was access to a rich hinterland or tributary area.

As industry became important those locations grew most rapidly which held some economic advantage for specific types of manufacturing. Such localities might possess one or more of the following attractions:

1. Raw materials of a particular type.
2. Power resources that were necessary for a certain type of industry.
3. Trained labor with special skills.
4. Climate particularly suited to a given type of production.
5. Large market for a certain type of product.

Although in the majority of urban areas, manufacturing and trade are the chief activities, there are many urban areas that owe their existence to other human activities. There are political capitals where the laws are made and from which they are administered; there are educational and religious centers and resort and health centers; and there are mining centers and settlements associated with other extractive processes. The point to be made here is that such special-function cities, also, are necessarily tied to locations of special natural advantages. Thus political capitals have been placed with regard to centrality in the area of jurisdiction, with the primary purpose of securing a location of optimum accessibility; recreational and health centers have been located in areas where the climate or other aspects of the geographic site contain elements that are advantageous for recreational or health purposes; and the relation of mining centers to geographical situation is almost too obvious to mention.

Location of Industry

Manufacturing areas tend to develop in proportion to the locational advantages offered to prospective incoming industries or to expanding activities of industries already established. Thus city growth is in part the product of industrial expansion and thus the sum of the growth of individual industries. It is necessary, therefore, to examine the considerations that lead to the location of an industrial enterprise. There are many factors that influence plant location—weight, size, and bulk of both raw materials and finished product, source of raw materials, location of

markets for the product, the freight rate structure, and labor supplies, to mention the major items. The final decision is based on consideration of all these factors, and, theoretically, the plant will be located at that point which provides the optimum advantage, the point of least cost.

A leading writer on the location of industry, Alfred Weber, has indicated that there are factors of a general nature and factors of a special nature that influence the location of industry. The general factors are costs of transportation, labor, and rent. These general factors influence the location of every industry more or less in one way or in another. On the other hand, such factors as the perishability of the raw materials or the finished product, the relations between the weight of the raw materials when processed and the value and weight of the final product manufactured, the influence of the degree of humidity in the air upon the manufacturing process, and the dependence upon fresh water in the manufacturing process are special factors that relate to the location of particular industries.³⁵

The major costs involved in manufacturing are costs of procurement, *i.e.*, purchasing and bringing the necessary materials and supplies to the site of processing; costs of processing, *i.e.*, transforming the materials into more valuable forms; and costs of distribution, *i.e.*, selling and delivering the output. Processing costs depend upon the prices of productive factors and the amounts of these factors needed in the manufacture of any product. Thus, the cost and availability of the productive factors would influence the location of an industry. There are many productive agents, a fact which tends to complicate the locational problem of determining the point of least cost.³⁶ Procurement costs can be lessened by locating near the productive factors and distribution costs can be reduced by locating near markets.

The costs of transportation or transfer include the cost of assembling the materials needed in manufacturing the final product and the costs of getting the final product to the consumer. Such costs fall into the category of general locational factors and we might say that, if all other costs and advantages are the same for different areas, "industry will be attracted to those locations which have the lowest costs of transport, having regard for both the place of consumption and the place of the deposits of raw materials."³⁷ The basic factors that determine transport costs are

1. The weight to be transported.
2. The distance to be covered.

³⁵ Weber, Alfred, *op. cit.*, p. 20.

³⁶ Hoover, *op. cit.*, Chap. 1, pp. 7-8.

³⁷ Weber, Alfred, *op. cit.*, p. 41.

3. The type of transportation system and the extent of its use.
4. The nature of the region.
5. The nature of the goods to be transported, *i.e.*, the qualities that, beside weight, determine the facility of transportation.

As Weber puts it, "The factor of transport costs will draw industrial production to those places where the fewest ton-miles originate during the entire process of production and distribution."³⁸

As our economic system has become more highly organized and specialization has increased, the contacts among individuals and organizations have increased tremendously. Materials and manufactured products in all stages of processing must be moved from specialist to specialist in the complex procedure of fabrication and distribution. Thus a location at a strategic spot on the web of transport and communication is essential to the carrying on of urban functions of trade and production. For these reasons, cities, towns, and villages will be found at the "nodal" positions on the organized routes of communication, *i.e.*, where two or more routes meet or cross.³⁹ From the standpoint of transportation costs as a whole, advantageous production points are found sometimes at the sources of raw materials, sometimes at markets, and sometimes at particularly favorable intermediate points, which are determined by the relative proportions of various materials used, the freight rate structure, and the sequence of material sources, junctions, and markets on the transportation network.⁴⁰

The influence of raw materials on industrial location may be illuminated by examining the four functional categories: ubiquitous materials, localized materials, pure materials, and weight-losing materials. Ubiquitous materials are found everywhere and exert no locational force. Localized materials are found only in special areas; the extent to which they exert a locational force depends upon what proportion of weight is lost in the production process. Where no weight is lost, they are called "pure materials"; there is no saving in carriage to be gained in any particular location.⁴¹

Wheat is an example of a material that loses weight in the process of manufacture; 270 pounds of wheat will make up into 196 pounds of flour. Coal, on the other hand, disappears completely in the manufacturing process and contributes no weight to the product. Considering the loss in the weight of wheat transmuted into flour, other things being equal,

³⁸ *Ibid.*, p. 48.

³⁹ Hoover, Edgar M., in *The Problem of Cities and Towns* (Cambridge, Mass.: Report on the Conference on Urbanism, Harvard University, March 5-6, 1942), p. 2

⁴⁰ Hoover, *The Location of Economic Activity*.

⁴¹ Weber, Alfred, *op. cit.*, p. 53.

flour mills will tend to locate near the wheat fields rather than near the market; but, since fuel is required and since it is fully weight losing, there is a locational pull toward the coal mines. Differential freight rates, however, disturb this pattern, since rates on coal and wheat are lower per pound than the rate on flour.⁴² The locational factors become very complex when several raw materials are concerned, each with a different weight-loss ratio. In some cases, the shape and bulk of the finished product has more significance than its weight through the effect on freight rates or difficulty of transport. For example, it is more costly to ship agricultural machines than the materials that are used in making them; thus manufacturing of this kind has tended to locate near the points of use. In general, processes that increase the weight, bulk, or perishability of materials that are processed tend to locate near the markets. Manufacturing that works in weight-losing materials tends to be found nearer sources of materials. In some cases the manufacturing process is split, as in the case of automobile production, where it has been found economical to ship parts for assembly into finished cars at points convenient to concentrated markets.

A producer will seek to locate in an area where his total processing costs are minimized, "a location conducive to high utilization of the productive capacity of factors and scale of output appropriate to that location."⁴³

Another important consideration in industrial location is labor supply. We have noted that the increase in the rural population and increased agricultural productivity enabled industry to arise. While it is true that "foot-free" population gathers where there are economic opportunities for employment, it is equally true that industry tends to concentrate where there is a qualified and adequate labor force. Some industries seek an adequate supply of unskilled labor; other industries require skilled labor; all industries are influenced by differentials in wage rates and seek to minimize net labor costs. Large, varied, experienced, and flexibly organized local labor markets are conducive to low-cost production. "Local concentration of an industry fosters the development of a labor force particularly productive in that industry."⁴⁴ For example, a concentration of workers skilled in making automobiles is found in Detroit, a group skilled in making moving pictures in Hollywood, and a force of skilled workers in the needle trades in New York.

We have already considered how certain economies result from the concentration of industry. These advantages also exert a directional in-

⁴² Ely and Wehrwein, *op. cit.*, pp. 418-421.

⁴³ Hoover, *The Location of Economic Activity*, Chap. 5, p. 89.

⁴⁴ *Ibid.*, Chap. 7, p. 111.

fluence. Some industries are locationally linked to others by either transportation economies or by economies arising from the complementary use of productive factors.⁴⁵ A clear example of advantageous locational juxtaposition is found where two industries have a direct trade connection, the one supplying the other with materials or equipment. Thus, if the "selling" industry is oriented toward the market to effect the maximum economies and if the "buying" industry is strongly material-oriented, the two industries will find it mutually beneficial to be located in the same area.

Another case of beneficial territorial juxtaposition will be found where economies of locational integration are the result. In the steel industry, blast furnaces and steel furnaces both involve high temperatures, and economies result if the intermediate product, iron, is transferred in a molten state rather than first cooled into pigs. Thus, we find that iron is smelted and the steel manufactured in the same area.

A third type of beneficial association occurs when there are two or more industries using jointly produced materials or manufacturing jointly demanded products. Thus the producers of automobile parts are territorially concentrated and the processors of the by-products of the packing industry cluster together in packing centers. A fourth type results from the complementary use of productive factors. Labor may be such a factor, as in the silk industry, where the wives of the coal miners are used to make the silk.

It has been made evident that industries may be material-oriented, labor-oriented, or market-oriented, depending upon the importance of each factor in producing and distributing the product. In addition, special factors are often present. For example, where an item is highly perishable, industry must locate near the market regardless of cost. Climate or power requirements affect the location of an industry. The woolen textile industry requires a particular type of climate, and the aluminum industry requires vast amounts of hydroelectric power. Paper-making calls for great quantities of water of proper chemical purity.

Commercial activities and industrial activities generally find it to their respective advantage to locate in the same areas. The urban areas as the centers of manufacturing concentration, the loci of important markets, and the focal points of transportation have been the points where commercial activities have found it advantageous to concentrate. One writer has indicated that the structure of transportation costs

... reduces the number of advantageous procurement and distribution points.
... on the organized transfer network, then, are certain strategically located

⁴⁵ *Ibid.*, Chap. 8, pp. 117-118.

transfer "nodes" with special locational advantages as procurement and distribution points and therefore as processing centers for all kinds of activities in which transfer costs are locationally important. There is only a limited number of such nodal points, and each is a production center for manufacturing as well as for trading and intermediate handling operations. Since the transfer advantages of these points rests partly on large-volume traffic and frequent and flexible service, there is evidently a cumulative pressure toward concentration of transfer advantage.⁴⁶

Functional Variation among Cities

There is a species of specialization among cities as among men, although it can never be so sharply defined. In the majority of urban areas in the United States, manufacturing or trade is the chief activity, but in many cases cities reflect a variety of aspects of our culture. One writer says that "all large cities are more or less multifunctional, and the classification of a city as industrial does not imply the absence of trade. There are shades of gradation between and among [types] and some cities are borderline."⁴⁷

Weimer and Hoyt classify cities in the United States as ⁴⁸

1. Cities devoted primarily to commerce, which includes seaports, lake ports, river cities, and railroad terminals and junctions. Farming centers can also be included here.
2. Industrial cities, including those devoted chiefly to the manufacturing and processing of commodities.
3. Cities that rely chiefly on extractive activities, such as mining, lumbering, fishing, and similar types of economic activity.
4. Political cities, including all those for which the activities of a state or the Federal government provide the basic income source.
5. Recreational and health resorts, as well as cities in which retired people reside.
6. Educational centers.

Of cities devoted principally to commerce there are seaports, such as Baltimore, Boston, Galveston, San Francisco, New Orleans, and Montreal; lake ports, such as Buffalo, Duluth, and Port Huron; river cities, such as Louisville and Memphis; and railroad terminals and junctions, such as Chicago, Atlanta, and Springfield, Ill. Of cities devoted to manufacturing there occur gradations of specialization. Some areas specialize

⁴⁶ *Ibid.*, Chap. 8, pp. 119-120.

⁴⁷ Harris, Chauncey, "A Functional Classification of Cities in the United States," *The Geographical Review*, vol. XXXIII, p. 86, January, 1943.

⁴⁸ Weimer, Arthur, and Homer Hoyt, *Principles of Urban Real Estate* (New York: The Ronald Press Company, 1939), p. 31.

heavily in the production of particular products, such as Detroit in automobiles, Gary in steel, or Fall River in textiles. In other cities manufacturing activities are more diversified, such as New York, Chicago, and Boston. Of the cities dependent upon extraction there are two types. One type includes cities devoted chiefly to the extractive industry itself, such as Hibbing, Minn., near which are located the huge open iron-ore pits. The second type are processing centers that are dependent upon particular supplies of raw materials and which might decline in population if the extractive operations ceased. Such cities include Birmingham, Ala., and the Scranton-Wilkes-Barre, Pa., area.⁴⁹

Many cities are dependent upon governmental activities, such as Washington, D.C., or any one of the state capitals of the United States. Recreational and health resorts include Miami Beach because of its climate, or Waukesha, Wis., because of its mineral water. Cities functioning as educational centers range from such areas as Ann Arbor, Mich., where education is the primary function, to Madison, Wis., where governmental activities and educational activities share importance. Other specialized cities include army and navy bases, such as San Antonio and Norfolk, New London and Pensacola; medical centers such as Rochester, Minn.; and insurance centers such as Hartford, Conn.

Table 2 indicates the relative importance of basic sources of employment in leading American cities.

It is possible to classify a few cities on the basis of a predominant basic activity, but, in varying degree, almost all cities are multifunctional. The Chicago metropolitan area is an example of a high degree of diversification of function: a wide variety of commodities is produced; it is an important center of trade and transportation; and it has been increasing in importance as a financial center. Another obstacle to useful classification is that, regardless of the productive, distributive, or service activities that may constitute the chief functions of various communities, there are a number of secondary processes that appear in every urban community. For example, the intracity distribution of goods and services is an activity that is common to all cities. Almost all cities serve as the distributive center for the surrounding rural territory. Some banking services are always needed, and all cities are provided with some form of transportation facilities. In every city the population engaged in the chief activities must be serviced in numerous ways. Governmental, retailing, recreational, and religious activities are universal in urban areas. Finally, certain types of manufacturing, which, for various rea-

⁴⁹ McMichael, Stanley, and Robert F. Bingham, *City Growth and Values*. (Cleveland: The Stanley McMichael Publishing Organization, 1923), pp. 31-32.

TABLE 2. RELATIVE IMPORTANCE OF BASIC SOURCES OF EMPLOYMENT IN SELECTED AMERICAN CITIES *

City	Percentage of total employment in basic activities			
	Manu- facturing	Trade	Extractive industries	Special sources of employment
Birmingham, Ala.	38	22	40	0
Los Angeles, Calif..	23	57	5	15
Denver, Colo....	25	46	0	29
Hartford, Conn....	60	30	0	10
Miami, Fla. . . .	15	25	0	60
St. Petersburg, Fla..	0	0	0	100
Chicago, Ill.	50	50	0	0
Gary, Ind..	100	0	0	0
Ames, Iowa.....	0	20	0	80
New Orleans, La...	25	65	0	10
Washington, D.C.	10	10	0	80
Boston, Mass.	50	40	0	10
Detroit, Mich.	75	25	0	0
Hibbing, Minn.	0	0	100	0
Gulfport, Miss..	20	34	12	34
Albany, N.Y....	50	35	0	15
Schenectady, N.Y...	90	10	0	0
Greensboro, N.C....	80	20	0	0
Bismarck, N.D..	0	40	0	60
Dayton, Ohio	80	20	0	0

* Weimer, Arthur, and Homer Hoyt, *Principles of Urban Real Estate* (New York: The Ronald Press Company, 1939), p. 46.

sons, are oriented toward the market are present in all cities. Such manufacturing includes that which produces either highly perishable or breakable items, items that have a low value relative to weight, items based on raw materials that are not weight losing. Examples of such products include bottled milk, beer, and carbonated water, bakery goods, newspapers, and bricks.

A final point on classification is that, since cities reflect the activities of a people in a given state of technology, resources, and the arts, the functions of cities and therefore the bases of a functional classification will change as the civilization and technical knowledge shift and as changes occur in the use and location of natural resources.

The Economic Base

This chapter has developed the fact that cities are functional organisms in contemporary society; that the very existence of cities is accounted for by economic functions that induce concentration; and that there are variations among cities in the pattern of functions.

Population tends to flow from areas of relatively less economic opportunity to areas of relatively greater economic opportunity. Thus, when a primary economic activity is expanding, the chance for employment draws workers from farms and villages or from other urban areas where primary activities are shrinking. As this population becomes urbanized, the employment opportunities in secondary and service activities draw in still more workers from outside. It is apparent that the size and prosperity of the population and the number and nature of economic activities that are in operation will determine the amount of land that is needed for the various urban uses. It is also true that the nature of the economic activities in the area will directly influence the structural pattern of the city. The industrial city will need more space for factories and for the modest homes of workers; the political capital may have little industry but, with its higher level of income, will need more space for cultural and recreational activities and for the more than ample homes of professional men and white-collar workers. The nature of the primary occupations will be reflected in the cultural backgrounds of the persons attracted to it and in the age and sex distribution of the group; these characteristics, in turn, will bear upon the demand for urban land and upon the land use pattern of the community.

A clear understanding of the economic base of a particular city is requisite to an understanding of the demand for the land located in it. No prediction of the factors that influence the demand for the services of urban land can be made without forecasting the future trends in the basic economic activities of the area. City planning, planning to meet the housing needs of the community, forecasting populations trends, foretelling the real estate market, appraising land values, predicting tax revenues—all and many other prognostications call for an analysis of the economic base of the area as a first step.

In general, the process of appraising the economic base of a community is a matter of gathering all available facts of economic significance, analyzing past experience and present status, and basing the forecast on an extension of recent trends as modified by those factors of change which can be discerned. More specifically this procedure involves a prediction of the nature, volume, and stability of employment and income in the community, and a forecast of the characteristics of the population. As a

first step, there should be an inventory of local economic resources—the geographic advantages of the community, the man-power resources, and the productive activities now being carried on or potentially capable of being carried on within the area. The primary or “city-building” activities should be identified, *i.e.*, those activities which bring into the community purchasing power from outside—the manufacture of goods exported to outside markets, the performance of professional services for non-residents, wholesale and retail trade serving areas beyond the community, other activities such as specialized recreational services offered to people outside the area, and state or Federal governmental facilities. Secondary or service functions are those activities which are mainly supported by workers in the primary industries. Retail trade, personal services, construction, local transportation, and local utilities are examples of secondary industries. The ratio of secondary to primary employment varies among cities. In New York it has been estimated at 212 persons in secondary occupations to 100 in primary industries.⁵⁰ In Detroit the ratio is said to be 117 to 100.⁵¹ It is probable that the higher ratios will be found in older, more mature cities and in cities with relatively high family incomes. A ratio of less than one to one would be unusual for a community of moderate size or larger.

Having identified the primary industries, the next step is to study their history and analyze their prospects in the area. It is important to appraise the competitive position of the local establishments in the national picture, to establish their relative efficiency, and to determine whether they are gaining or losing relative to similar establishments in other areas. The dominant characteristics of the primary industries should be studied and the underlying trends in the demand for the products of the industries should be appraised. The stability of this demand should also be examined. An attempt should be made to evaluate the vulnerability of each local industry to change, *i.e.*, to estimate to what extent the industry can adjust to changes in technology and to variations in the nature of demand and whether it is in a strong financial position so that it can meet price competition, finance technological improvements, or weather a depression. Studies of wage rates and annual earnings in each employment should be made as a basis for forecasting the future level of incomes.

Forces of Change. The analysis of the economic base of a community requires both a cross-section description and the identification and evaluation of the forces of change. We now examine some of the more important

⁵⁰ Regional Plan Association, *Economic Status of the New York Metropolitan Region in 1944* (New York: Regional Plan Association, 1945).

⁵¹ Detroit City Plan Commission, *The Economic Base*, 1944.

factors that may influence basic economic activities and modify the existing economic pattern.

The fluctuations in national economic health affect all cities in some degree. There are marked differences among industries and occupations with respect to sensitivity to changes in general business conditions. Some industries react quickly and violently; other activities respond more slowly and moderately. Automobile production and the heavy machinery industries, for example, have histories of wide fluctuations. At the other extreme is governmental employment, which in the Federal area actually increased during the last depression. In industrial areas, the decline in job opportunities and in earnings which accompanies a business depression results in outward population movements often of major proportions; returning prosperity reverses the flow. There is evidence that during periods of industrial stagnation there is a tendency for capital to seek new locations in order to lower costs. However, it is in times of active new investment that there occurs the more important geographical shifts in productive equipment and capacity; changes in the pattern of actual production occur in all phases of the business cycle.⁵²

Changes in transportation facilities and in costs of carriage may bring about shifts in the economic base of a community. Improved freight schedules, the expansion of trucking, and the development of such new facilities as air freight are often cause for shifts in relative locational advantages. For example, a separation of industrial functions may be made possible, as in the case of the automobile industry. All-season highways and dependable truck transport now make it feasible to produce a variety of small automobile parts in Ann Arbor, Ypsilanti, and other small towns from 25 to 50 miles from Detroit, to be shipped into the central plants for assembly. Another example is the increasing number of automobile assembly plants in locations far from the fabricating plants but convenient to the major markets. The gradual rationalization of the freight rate structure for the country will reduce the special locational advantages now enjoyed by some areas and will enhance the position of other districts.

As technological advance in industrial processes replaces men with machines, the workers released into the general labor pool become available to attract additional industries into the area; or they may drift into other localities where their skills are in demand. In either event, shifts in local industrial patterns will occur. It has been argued that as an industry comes to technical maturity, skill requirements and other centralizing considerations diminish in importance and decentralization often

⁵² Hoover, *The Location of Economic Activity*, Chap. 9, p. 146.

occurs.⁵³ The decreasing dependence on specialized labor gives greater freedom to the industry in seeking locations that are advantageous from other standpoints.⁵⁴ In general, it may be said that changes in the manufacturing processes of an industry may alter the importance of access to market, to materials, or to sources of power. New methods that cut down waste or result in a better quality product at no higher cost may reduce or enhance the advantages of a given location for an industry. The discovery of a useful by-product or of a new use for a by-product can have important locational significance. The development of new energy sources may give added flexibility in industrial location; for example, the development of electrical power for industrial use has been a decentralizing factor. It is challenging to speculate on the results of the industrial application of atomic energy.

Many urban areas are dependent upon activities that are directly related to the exploitation of natural resources. When the resources approach depletion, or when, as in the case of mining, only low-grade ores remain, the whole economy of the area is seriously affected. The Great Lakes cutover region is an example of almost complete resource depletion; in this area, many towns that were booming during the logging days have almost completely disappeared or have been reduced to vestigial communities dependent upon summer resorters.

Diversification. Diversification in basic industries in a community often provides a special resistance to the deteriorating forces of change or business depression. Thus a part of the analysis of the economic base of an area is an examination of the particular combination of economic activities that are found there. In general it may be said that the greater the variety of employments in a community, the less will be the dependence upon any one of them and the stronger the resistance to change. The stability of income and employment that is the product of diversification may result from compensating seasonal fluctuations among local industries, the variability among the industries in their sensitivity to external changes in general business conditions, and a greater facility in the replacement of declining industries in the area. Another advantage of diversification is the fuller use of complementary labor groups, such as wives and daughters of factory workers, with a resulting broadening of the employment base and a greater stability of family earnings.⁵⁵

A one-industry town is generally less stable than a community where there is diversification of activity. However, the nature of the particular industries concerned is perhaps more important than the degree of diver-

⁵³ *Ibid.*, Chap. 10, p. 174-175.

⁵⁴ *Ibid.*

⁵⁵ *Ibid.*, Chap. 17, p. 285.

sification. It is well recognized that certain industry types are more volatile than others; for example, the construction industry and the production of durable goods are subject to wide cyclical fluctuations while food processing, trade, consumer services, and the manufacture of non-durable consumer goods are more stable.⁵⁶ Thus, diversification among the more volatile types of employment may provide less resistance to depression than specialization in a single activity that is characterized by stability. For example, a single-industry community that is supported by the insurance industry or by some tax-supported public activity may have greater economic resistance than a city with a more diversified background of heavy industries.

Changing Factors of Urbanization

The forces that lead to concentration of people in cities are in part physical and in part cultural, using this term in the broadest sense. The physical consideration is the "costs of friction," i.e., the energy and time required to move people, goods, and information from place to place.⁵⁷ Thus, with the increasing complexity of production and distribution, with the proliferation of artifacts and the infinite specialization of function, the more important (in the aggregate) becomes the physical proximity, or stated in the converse, the more costly becomes dispersion. This principle is immutable and grows out of the laws of physics. However, the impact of this basic relationship is modified by cultural forces; and because the cultural framework of society is ever changing, so there are continual changes in the final direction and strength of the factors that affect city growth and structure. The history of urbanism demonstrates that, while the underlying impulsion toward concentration is unchanging save in intensity, there are additional factors that appear and disappear with changing social organization and with technological advance. In fact, at the present there are certain forces that are tending to counteract the pressure toward concentration of population and industry and which may forecast a further diffusion of urban population into suburbs and small cities rather than an increasing concentration of jobs and people in our great urban centers. The strength of these forces of diffusion is unpredictable, but their direction is plain. It will be seen that some of the very factors that have been responsible for the growth of great cities, such as the improvements in manufacturing and transportation methods, are now working in an opposite direction.

We may reveal the changing factors of urbanization by examining

⁵⁶ *Ibid.*, p. 287.

⁵⁷ See Haig, *op. cit.*, p. 38.

separately the cultural phenomena that in the past have been influential in the evolution of urbanism.

Defense. In early times, "protection of life and property was . . . the most vital reason for urban centralization."⁵⁸ The compact, walled cities of that era reflect the importance of defense. The development of bombardment artillery long since has rendered such arrangements obsolete; and the military tactics of today call for dispersion rather than concentration of urban facilities. Protection of the vital war-production facilities requires that they be decentralized, with the production process for each armament item broken down and physically dispersed. The atomic bomb has greatly strengthened the argument for a general dispersal of population.

There is little evidence in this country that military considerations have encouraged decentralization. During the recent war, much was said about dispersion, but the facts are that the development of additional industrial capacity to meet war needs took place largely in and about the existing areas of industrial concentration and so contributed to more rather than less centralization.

Religion. The centralizing power of religious influence and organization, which once came to a focus in the cathedral town, the shrine, or the bishopric, no longer plays a significant role among the factors of urbanization.

Political Power. Historically, the centers of government were found at focal points in the existing communication system along with the centers of trade. Governmental functions were well centralized and because of poor facilities for communication, those having business with officials were forced to come in person to the seat of power. With the development of modern political and administrative techniques and modern methods of communication, political power has become more decentralized in location. The existence of a multiplicity of independent political subdivisions, towns, and cities within the framework of a higher sovereign body and the maintenance of administrative services in many different centers have been a force, if somewhat mild, toward decentralization.

Other factors of a governmental nature that are tending to disperse urban populations include the heavy property taxes levied in central cities, which may drive citizens and industries to peripheral locations where the tax burden is lower. The existence of restrictive building codes and zoning ordinances accounts for some of the undesirable construction and chaotic land use pattern in outlying areas where, for one reason or another, families and business seek freedom of action.

⁵⁸ Hoyt, Homer, "Forces of Centralization and Decentralization," *American Journal of Sociology*, vol. XLVI, no. 6, p. 845, May, 1941.

Agriculture. The increasing use of agricultural products as industrial raw materials is having some small decentralizing influence in leading to the establishment of processing plants near the sources of supply in rural districts. There is also some increase in food-processing activities located in small towns and villages in agricultural regions.

Trade. There have been gradual changes taking place in the distribution system, which have multiplied its channels and have reduced the points of concentration. For example, the decline of wholesaling activities and the increase in direct buying from the manufacturer have resulted in the diminishing of an important urban function. The increasing standardization of commodities has contributed to this change at the wholesale level and at the same time has facilitated the buying at retail through the mail, particularly from the mail-order houses. The increasing accessibility of the cities to the rural population, the wide circulation of metropolitan newspapers, and suburban delivery service are broadening the trading areas of cities and tending to increase the concentration of certain marketing activities. But though the market center itself may increase in size as a result, there is a strong decentralizing effect on the location of residential districts. Furthermore, the increasing variety of goods offered in the smaller cities because of improved trucking facilities and the spread of chain stores to the smaller places has reduced the relative consumer advantage of living in the central city. The inconveniences of congestion in the larger centers and the difficulties of parking encourage the diffusion of the retailing function.

Manufacturing. Earlier considerations of the relationships between industrial development and urbanism have pointed out that certain recent developments have led toward diffusion rather than concentration. For example, the spreading substitution of electrical power for steam power tends to equalize the energy cost advantages of large urban plants and small suburban or village factories.⁵⁹ Because of the ease of distributing electricity, there is no longer the same advantage in concentrating production at the source of power. Again, the increasing use of water power for generating electrical energy has multiplied the locations suitable for manufacturing. Another locational influence of electrical power is brought to bear through the design of industrial plants. When steam was the power source, compact, multistory structures were used in order to minimize the transmission loss in carrying power from a central point to the points of application through a system of shafts, belts, and pulleys. Modern factory design calls for large single-story plants, which are more efficient in the handling of the horizontal movements of materials and

⁵⁹ Hoover, *The Location of Economic Activity*, Chap. 10, p. 181.

products. Such plants require large sites, with the result that there is a greater compulsion to locate on cheap land outside the central city. Another advantage of peripheral locations is in lower taxes and in the lower costs of providing the extensive parking areas that are required for the cars of employees.

The advantages of the concentration of industrial activities have been pointed out as one of the explanations of urbanism. However, concentration carried too far results in offsetting disadvantages. The sheer physical concentration of plants can create excessive costs of traffic congestion. Industrial concentration may be carried to a point where the land costs and tax valuations are inflated;⁶⁰ the heavy demand for labor may accelerate increases in wage rates.⁶¹ Furthermore, where there is a chronic pressure on the labor supply, restrictive practices and labor disputes are more likely to flourish.⁶² As labor costs increase, manufacturers are encouraged to develop laborsaving machinery, and, with the increasing substitution of machines for men and an increase in the proportion of semiskilled operatives at the expense of the skilled workers, there is less need to be located at the source of a specialized labor pool. Plants may find it advantageous to move to less congested areas to take advantage of lower labor costs.

The lower labor costs in the smaller communities reflect not only lower wage rates but also greater productive efficiency. In part, this higher productivity is a result of the closer employer-employee relationships that are found in the smaller places. Moreover, because unionization is more widespread in the large cities, many producers look to the small towns as points of possible escape from union exactions. The advantage of the small town will decrease as unionization spreads or as minimum-wage laws or other factors tend to raise wage rates in small communities.

In the earlier stages of the Industrial Revolution, the existence of a labor pool was highly important in industrial location. Factories and workers were crowded together in industrial communities. Today industry is much less dependent upon concentrations of workers. We have pointed out that as machinery replaces man power and as fewer skilled workers are required in industrial processes, greater flexibility in location is possible. Furthermore, the workers themselves are more mobile than in the past; the widespread use of the personal automobile, made possible by improving highway systems, has greatly extended the labor market area within which plants may locate. The workers themselves are to an increasing extent indicating a preference for suburban living.

⁶⁰ Weber, Alfred, *op. cit.*, p. 132.

⁶¹ Marshall, *op. cit.*, p. 272.

⁶² Hoover, *The Location of Economic Activity*, Chap. 7, p. 114.

The tendency for shorter hours and more leisure time is increasing the desirability of a suburban or small-town home with space for gardening and with easy access to recreational opportunities.

In an earlier part of the chapter, we pointed out that recent developments in transport, notably trucking, and the rationalization of the freight rate structure were decentralizing factors. Until recently, air transport has been a centralizing influence, since only the larger cities were equipped with adequate air terminals. Recent developments in feeder lines have placed an increasing number of smaller communities on the airline network and the further improvement of the helicopter promises an even wider extension of air transport. We cannot now foresee the results of the spread of private flying or the locational significance of jet-type power plants for aircraft.

The adoption of urban ways of living by rural people, the wider range of articles available from mail-order houses, and the accessibility of cities by car and bus for purposes of entertainment and shopping are factors tending to reduce the attractions of city life for country folk. On the other hand, the increasing frictions of city life, the confusion, and the cramping are decreasing the attractions of city life for city folk.

No one can predict the outcome of the struggle between the centripetal and the centrifugal forces that are exerted upon our urban areas. At the present, it appears that the forces of diffusion are gaining strength, but it is quite possible that this gain will be offset by the devising of methods for decreasing the costs of congestion and for making the city a more attractive place to live. The use of elevated highways and the provision of more and better parking space for private cars offer encouraging possibilities. Perhaps our great cities can be replanned and rebuilt before the forces of deterioration have gone too far.

A future "revolution" of equal significance with the industrial revolution is possible and even probable. Who can contemplate the coming atomic age without speculating on the effects on population distribution that might result from the application of atomic energy to industrial processes and even for domestic use? What new forms of transportation await us as we learn to use jet propulsion for purposes other than the destruction of our fellow men?

We may expect the metropolitan areas of the country to continue to grow in relative importance. At least nothing is now in view to make them economically obsolescent. Improved long-distance transportation increases their advantage as focal points. A large share of the newly built war plants are in metropolitan areas; the facilities are modern and of the most advanced design. Many of these facilities are available for new or

expanding industries and will be the natural loci of industrial growth for some years.⁶³

Urbanism in the United States

Let us briefly trace the growth of urbanism in the United States. Urban population is defined by the U.S. Bureau of the Census as that living in cities and other incorporated places having 2,500 inhabitants or more, all the remainder being classified as rural. In 1790, only 5.1 per cent of the total population was urban, but by 1940 that proportion had increased to 56.5. During the first 50 years of our history, the rate of change in the proportion was slow, for urban population had reached a level of only 10.8 per cent by 1840. By 1900, the proportion had increased to 39.7 per cent and urbanization continued at a rapid pace until 1930, when the ratio leveled off at 56.2 per cent, or virtually the same level as was found 10 years later. In the decade from 1930 to 1940, the increase in the total population of the United States was at a lower rate than in any other decade in history, and, as we have seen, there was almost no change in the proportion of the population that was urban. This stability in the urban-rural ratio is explained in large part by economic conditions. The depression of the thirties reduced economic opportunity in cities, led to extensive urban unemployment, and brought about a substantial emigration from urban areas, particularly in the years from 1932 to 1934. The tide gradually turned as conditions improved, but the loss was hardly more than made up by the end of the decade (see Table 3).

The differential increase in urban and rural populations has been a direct result of differential economic, social, and cultural opportunities that have existed in cities. The rural population has grown most rapidly during periods when new agricultural lands were being opened up. But the rate of growth of the rural population has been slowed down as the frontier disappeared and as technological improvements in agriculture led to a steadily rising productivity per man. Concurrently, the consumption of agricultural products was being restricted by the increase in international trade barriers, the low income elasticity for agricultural products, and the growing intensity and frequency of industrial fluctuations resulting, in the depression stage, in curtailed purchasing power and reduced consumption of agricultural products. As a result of this agricultural "surplus," together with the great rise in industrial, trade, and service activities, cities increased both in number and in size. Indicative of this shift from agricultural to industrial and commercial pursuits is the fact that in 1850 about 50 per cent of all workers were engaged in

⁶³ Hoover, in *The Problem of the Cities and Towns*, pp. 3-4.

TABLE 3. URBAN AND RURAL POPULATION OF THE UNITED STATES, 1790 TO 1947 *

Census year	Total population	Urban population		Rural population	
		Number	Per cent	Number	Per cent
1947	142,061,000	83,860,000	59.1	58,201,000	40.9
1940	131,669,275	74,423,702	56.5	57,245,573	43.5
1930	122,775,046	68,954,823	56.2	53,820,223	43.8
1920	105,710,620	54,157,973	51.2	51,552,647	48.8
1910	91,972,266	41,998,932	45.7	49,973,334	54.3
1900	75,994,575	30,159,921	39.7	45,834,654	60.3
1890	62,947,714	22,106,265	35.1	40,841,449	64.9
1880	50,155,783	14,129,735	28.2	36,026,048	71.8
1870	38,558,371	9,902,361	25.7	28,656,010	74.3
1860	31,443,321	6,216,518	19.8	25,226,803	80.2
1850	23,191,876	3,543,716	15.3	19,648,160	84.7
1840	17,069,453	1,845,055	10.8	15,224,398	89.2
1830	12,866,020	1,127,247	8.8	11,738,773	91.2
1820	9,638,453	693,255	7.2	8,945,198	92.8
1810	7,239,881	525,459	7.3	6,714,422	92.7
1800	5,308,483	322,371	6.1	4,986,112	93.9
1790	3,929,214	201,655	5.1	3,727,559	94.9

* U.S. Bureau of the Census, *Current Population Reports*, Series P-3, no. 21; Series P-20, no. 9.

nonagricultural pursuits; by 1945 this proportion had risen to 84.3 per cent (see Table 4).

Greater economic opportunities in American cities drew not only the farm population of the United States, but also peoples from other lands. A large proportion of the immigrants who fled their native lands for political or economic reasons to seek the treasures of the American cities found their way to the industrial cities of the North. Around the turn of the century, from 500,000 to 900,000 persons per year were being admitted to this country. Immigration laws have now reduced this flow to around 50,000 per year (see Table 5).

In addition to the better job opportunities found in cities, the cities have exerted another magnetic force drawing young men and women from farm and village into the urban maelstrom. The cities, with their concert halls, museums, libraries, opera and legitimate theaters, higher educational institutions, research and publishing activities, professional organizations, and religious and welfare institutions, are great and attractive cultural centers. The bright lights of the city, romanticized in

TABLE 4. FARM POPULATION AND EMPLOYMENT, 1910-1945 *

Period	Farm population (millions)	Per cent of total population	Employment in agriculture (millions)	Per cent of total employed
1910-1914	32.2	34.0	11.2	
1915-1919	32.0	31.2	10.7	
1920-1924	31.4	28.7	10.4	26.3
1925-1929	30.4	25.7	10.1	22.8
1930-1934	31.1	25.0	9.7	24.2
1935-1939	31.0	24.1	9.5	21.8
1940-1944	28.3	21.1	8.6	17.1
1945	28.2	18.1	8.1	15.7

* Population estimates prepared jointly by U.S. Departments of Agriculture and Commerce; employment estimates, U.S. Departments of Commerce and Labor, based in part on data from U.S. Department of Agriculture.

TABLE 5. IMMIGRATION INTO THE UNITED STATES, 1821 TO 1944 *

<i>Year</i>	<i>Number</i>
1821-1830	143,439
1831-1840	599,125
1841-1850	1,713,251
1851-1860	2,598,214
1861-1870	2,314,824
1871-1880	2,812,191
1881-1890	5,246,613
1891-1900	3,687,564
1901-1910	8,795,386
1911-1920	5,735,811
1921-1930	4,107,209
1931-1940	528,431
1940-1944	203,589

* U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States, 1944-1945* (Washington, D.C.: U.S. Government Printing Office, 1945), 66th no., p. 109, Table 113.

song and story, and the lure of the adventure and excitement they promise have created dissatisfaction among rural youth and led them to seek their fortunes in the far cities. For them the freedom and stimulation to be found in the great urban areas have always stood in golden contrast to the dull routine and limitations of their home life. It is significant that following both the First and the Second World Wars thousands of returned soldiers, originally from rural areas and disliking to return after having once been emancipated, moved into the cities in search of jobs.

Before the developments of modern methods of sanitation and waste removal in cities and the great strides that medical science has made in recent decades, the death rate in cities was very high. But today cities are much more healthful places in which to live, and death rates have been greatly reduced. In fact, in spite of the relatively low birth rate in cities, urban areas as a whole do show some growth through natural increase, *i.e.*, an excess of births over deaths.⁶⁴

The urbanization of our nation has been accompanied, of course, by an increase in the number and importance of large cities. From 1900 to 1930, the percentage of the total population that was found in and near the 63 metropolitan zones centered about cities of 100,000 persons or more had increased from 36.9 to 42.2 per cent.⁶⁵ In 1890 there were three cities with populations over 1 million and in 1930 there were five such cities. Table 6 shows the pattern of distribution of the urban population among city size groups.

TABLE 6. PERCENTAGE OF URBAN POPULATION IN CITIES OF VARIOUS SIZES, 1920 TO 1940 *

Population	Percentage of urban population		
	1920	1930	1940
2,500-5,000	8.1	6.8	6.7
5,000-10,000	9.2	8.5	8.9
10,000-25,000	13.0	13.2	13.4
25,000-100,000	19.1	18.7	19.9
100,000-500,000	18.8	23.5	21.5
500,000-1,000,000	12.1	8.4	8.2
1,000,000 and over	19.7	20.9	21.4
Total	100.0	100.0	100.0

* 1940 Census, *Population*, vol. I, p. 32, Table 12.

Although there continue to be migrations, new areas of exploitation and expansion, and technological changes that influence the location of population, the pattern of settlements seems to have established an uneasy equilibrium. We may expect no substantial change within the next few decades in the present population configuration, which finds the heaviest

⁶⁴ U.S. Bureau of the Census, *Population*, Series P-3, no. 21, Nov. 15, 1941.

⁶⁵ McKenzie, R. D., *The Metropolitan Community* (New York: McGraw-Hill Book Company, Inc., 1933), p. 21.

densities in the Northeast, the Middle West and west coast. There has been a long-term tendency to concentrate near deep water, on the sea-coasts and the Great Lakes. As we shall note within the major geographic regions, the tendency is definitely toward local agglomeration, with the metropolitan aggregations distributed widely over the country.⁶⁶

It has been estimated by the Bureau of the Census that the total population of the country increased from 1940 to 1947 by more than 10 million persons or to about 142 million. This 7-year increase was more than the total increase of the preceding decade, reflecting the abnormal wartime birth rate. As long as the birth rate remains above normal, we may expect a high rate of population increase, possibly for the next several years.⁶⁷

The current severe housing shortage is evidence that urban areas are gaining substantially in population. During the war, there were great internal migrations in this country. In all, some 15 million persons, excluding members of the armed forces, changed their places of residence from one area or community to another. Many of these persons were war workers moving from farms and rural areas to cities. Although a substantial proportion have returned to their original homes, there has been a deposit of millions of people left in our urban areas composed of recent immigrants who plan to remain permanently.⁶⁸ As a result of the wartime population shifts, there is evidence that the South and particularly the West have made some gain at the expense of the North. The high concentration of wartime population movements is evidenced by the fact that from 1940 to 1943 the civilian population of 137 metropolitan counties increased by 1,627,000 or 2.4 per cent, thus more than offsetting by immigration the loss of population to the armed services. There was a loss in population in 56 of these areas and a gain of 9.6 per cent in 81 of the communities. At the same time, that part of the country which is outside of the metropolitan counties lost 7.3 per cent of its population.⁶⁹

Population experts forecast that future city growth will proceed at a slower rate than in the past. Retarding factors are the decline in the birth rate and the cessation of foreign immigration. Cities will be mainly dependent upon rural-urban migration for growth. While we may expect metropolitan areas to grow at a faster rate than the rest of the country, we shall not see such rapid spurts as were experienced during the first

⁶⁶ *Ibid.*, p. 22.

⁶⁷ U.S. Bureau of the Census, Series P-46, no. 1.

⁶⁸ *Ibid.*, Series P-20, no. 2.

⁶⁹ Hauser, Philip M., *Journal of Marketing*, January, 1944.

quarter of this century. The steady decline in the rate of population growth of the nation as a whole and the imminence of population stability are bound to dampen the expansion of urban areas.⁷⁰

Metropolitanism

As a functional entity, the city is not defined by its political boundaries for its influence spreads far beyond the city limits. With the coming of improved methods of communication, notably the automobile and the telephone, the old urban form of a compact community that was sharply separate economically and socially from the surrounding rural territory has been replaced by a more open settlement, in which town and country merge gradually and in which the central city has, in effect, simply expanded its communal life over a wider and less intensively developed area.⁷¹ The underlying forces that have led to the concentration of people in urban areas are still present, but better communication and transport have reduced the advantage of compactness in the physical arrangement of functions.

The Bureau of the Census has recognized the social and economic unity of the central city and its environs and has set up what are called "metropolitan districts." The metropolitan district is not a political unit "but rather an area including all of the thickly settled territory in and around a city or group of cities. It tends to be a more or less integrated area with common economic, social, and, often, administrative interests."⁷² For statistical purposes, the Bureau has set up such a district for each city of 50,000 or more population, including sometimes two or more such cities in one district. In addition to the central city or cities included in such a district, all adjacent and contiguous minor civil divisions or incorporated places having a population of 150 or more per square mile are included to make up the metropolitan district, and in some such districts a few less densely populated contiguous divisions are included on the basis of special qualifications. Sometimes only a portion of a minor civil division is included where the remote sections are sparsely settled.

In 1940, 140 such metropolitan districts were set up, containing a total population of 62,965,773, which represented 47.8 per cent of the total population of the United States. Of this number of persons concentrated in and around the urban centers in the United States in 1940, 68.3 per

⁷⁰ Jaffe, Abram J., "Population Trends and City Growth," *The Annals*, November, 1945.

⁷¹ McKenzie, *op. cit.*, Chap. 6.

⁷² U.S. Department of Commerce, Bureau of the Census, *Census of Population*, 1940, vol. I (Washington, D.C.: U.S. Government Printing Office, 1942), p. 11.

cent were located within the central city and 31.7 per cent were located in the surrounding area.

The census data on the growth of the rural nonfarm population demonstrate the numerical importance of the group that lives near but not in incorporated places and which is composed mainly of urbanites whose occupations and culture are essentially of the city. In 1940, the rural nonfarm population of the country was 27 million as compared with 74 million urban and 30 million rural farm population. From 1930 to 1940, the rural nonfarm population increased by 14.2 per cent while the urban population grew by 7.9 per cent.

Additional evidence of the spread of metropolitanism is shown in the growth of the cities, towns, and villages that are satellite to large cities. Table 7 shows that from 1920 to 1930 such places grew much faster than communities of the same size beyond the influence of a central metropolitan city.

TABLE 7. RATE OF POPULATION INCREASE IN SMALL CITIES AND IN RURAL TERRITORY WITHIN AND WITHOUT METROPOLITAN DISTRICTS, BY SIZE OF CITIES, 1920-1930 *

Type and size of place	Rate of increase	
	Within metropolitan districts	Without metropolitan districts
Rural area.....	54.8	3.7
2,500-5,000....	69.8	16.9
5,000-10,000 . . .	47.7	19.6
10,000-15,000.. .	39.6	20.5
15,000-25,000....	26.6	23.0
25,000-50,000. . .	32.8	20.7
50,000-100,000.....	20.5	11.0

* McKenzie, R. D., *The Metropolitan Community* (New York: McGraw-Hill Book Company, Inc., 1933), Table 22, p. 48. The metropolitan districts used are those of 1930 (U.S. Census, 1930, *Metropolitan Districts*), but the cities and rural areas are classed according to their population in 1920. Territory rural in 1920 is counted rural in 1930, although it may have contained one or more incorporated places in 1930. Abridged from Table 10 in *Population Trends in the United States*, by Warren S. Thompson and P. K. Whelpton.

Every populated settlement is the point of origin of a complex of social and economic forces that spread into the hinterland. Even the

crossroads trading center extends its influence beyond the little grouping of stores and homes. It is an assembly point for certain farm products of the rural hinterland; it is the point of distribution of artifacts and foodstuffs; news is exchanged and opinions formed around the cracker barrel of the general store; and the social activities of the rural community center in the church, the grange hall, and the movie house. The pattern of relationships is not essentially different for the great metropolitan centers. The larger the community the greater the variety of activities and thus the more varied the relationships between central city and hinterland and the more extensive the zones of influence. The increase in the frequency and intensity of relationships may account for the growing tendency toward a leveling of the social differences between town and country.

The larger metropolitan centers are clusters of communities, a central nucleus surrounded by a constellation of subcenters. These minor points of concentration may be existing towns and villages that have come within the expanding influence of the central city, or they may be newborn dormitory or industrial suburbs. The economic and social focus of the subcenters is toward the central city, and all contacts with other metropolitan areas are through the central city. The larger the metropolitan aggregation, the greater is the tendency toward specialization of the differentiated parts and areas.⁷³ The greater the specialization, the greater the interdependence of the clusters that make up the metropolis.

The economic, political, and social influence of every community takes the form of a set of overlapping, roughly circular zones of various extent. In the simple case of the crossroads village, the trading zone and the zone of social influence are essentially the same, but a large city, with its myriad activities and functions, extends its outward influence in infinite ways. Its zones of influence are complex and multitudinous. The economic relationships are reflected in such zones as the trading area and the commuting zone. But the trading area is different for various types of product. Certain goods are sold at retail only in the central city; other articles may be purchased in any satellite community. The wholesale zone is, of course, far more extensive than the retail trading area. Zones of influence of recreational activities are varied. People may come 25 to 50 miles to attend the legitimate theater, but even the downtown movie palace may not draw many customers from beyond the central city. There are zones of a physical character such as those determined by the electrical distribution system, the sewage district, or the water system. The political influence of the city hall extends only to the city limits,

⁷³ McKenzie, *op. cit.*, p. 81.

though various governmental administrative regions may extend beyond the city limits. The social influence of the city is measured in part by the zone of newspaper circulation for the metropolitan papers or by the limits at which suburban telephone tolls begin. Thus there is difficulty in defining urban and rural territory, for the influence of the city may be found in various combinations far out in the hinterland. Another characteristic of urban influences that hampers this determination is their gradient nature.⁷⁴ Thus many zones shade off, as the distance from the central city increases, to a limit that is ragged and ill defined.

The rural-urban fringe is a transition zone between the concentrations of people and structures that we classify as towns and cities and the areas that are predominantly in agricultural use.⁷⁵ In this transition zone we find a wide variety of land uses, some urban and some rural in character; in fact, certain land uses, such as golf courses, private schools, fair grounds, sewage disposal plants, and airports are situated in the fringe areas for sound locational reasons. It is the fringe area that provides the space for urban expansion, and the land in this territory is in various stages of ripening for conversion to strictly urban use and for absorption by the city. The people who occupy this zone are a mixture of truck farmers, home owners who work in the city, junk dealers, and others, some urbanites, some farmers, and some native and natural to the periphery. In our study of the economics of urban land utilization and in considering the city as a functional entity that has emerged to serve the needs of modern Western civilization, the hinterland areas of the central city must be treated as functional parts of the city itself.

⁷⁴ McKenzie, *op. cit.*, p. 76.

⁷⁵ Wehrwein, G. S., "Land Uses in the Rural-urban Fringe," in the *Proceedings of the Commonwealth Conference*, University of Oregon, 1942.

CHAPTER 3

THE CITY AS A SOCIAL COMPLEX

In the preceding section we have attempted to discover the underlying forces that have given rise to the phenomenal growth of cities. We have seen that the great concentration of people and buildings and machines in urban areas has been the result of an economic and technical evolution in a number of fields and that it has been coordinate with the development of a complex economic organization that has multiplied the production of wealth and raised the standard of living. The city has been pictured as an economic mechanism wherein the basis of demand for the services of land is the need for sites for the performance of the economic functions of production, consumption, and distribution. This relationship between the rise of urbanism and the evolution of our modern economic system is recognized in a recent sociological study of the city. "There appears to be a genuine functional relationship between the two, such that the unique features of the modern great city—its *raison d'être*, its organization, and its spacial structure—can only be understood in terms of the contractualistic value system under which it has emerged."¹

In the processes of the production, distribution, and consumption of economic goods and services, the human element is central, for underlying all economic relationships are the behavior patterns, the value systems, and the psychology of the human beings who participate in economic processes. Thus underneath all economic laws, the final basis of human action is cultural and psychological; it follows that the problems of the structure of cities, the earnings of the buildings that house the urban population in their life functions, and the very growth of cities turn on individual and collective taste and preference as shown in social habits and customs. One authority on urban structure and growth writes, ". . . As long as human activity continues to alter the conditions of city

¹ Firey, Walter, *Land Use in Central Boston* (Cambridge, Mass.: Harvard University Press, 1947), pp. 252-253.

life, and human tastes, prejudices, fashions, habits, and customs continue to vary, city structure and values will shift and change.”²

Frank Knight says that “the economist meets the problem of conduct and motive at every point and stage of his work.”³ Each datum of conduct or behavior is the joint product of the individual, the situation, and the culture. Thus generalizations with respect to behavior must be made cautiously and with proper qualifications and limitations. Economists must work with such generalizations; they must forecast behavior under sets of given circumstances. But the economist is primarily concerned with behavior; he does not look behind conduct to its psychological or ethical content. He must know *how* people act and react but he leaves the *why* to the social psychologist and the philosopher.

It is a truism that human behavior varies with circumstances. In our study of the demand for urban land up to this point, we have dealt with the demand for urban land arising from the need for space for the performance of economic functions, and we have seen how human behavior under changing circumstances brings about changes in the nature of this demand for space. We are now to turn our attention to the social characteristics of urbanites and their way of life, for these are circumstances that also condition demand and have a direct influence on the pattern of land use, on land values, tenure, and the type and design of buildings.⁴ Thus we are now concerned with the sociological characteristics and circumstances that affect demand behavior with respect to urban land. From this point of view we shall consider cities as settlements of individuals living together in complicated economic and social contact. We are interested in urban population trends, in the nature of the people who inhabit cities, their age and sex distribution and racial and geographic origins. We are also concerned with social changes that may modify urban behavior patterns and thus affect the demand for the services of urban real estate.

Sources of Urban Population

By an examination of the origins of city people, it may be possible to gain some understanding of the factors in their characteristics and cultural backgrounds that may affect the demand for the urban land on which they live. In order for cities to grow or maintain their populations, births and immigration must offset deaths and emigration. The extent

² Hurd, Richard M., *Principles of City Land Values* (New York: The Record and Guide, 1924), p. 159.

³ Knight, Frank H., *The Ethics of Competition* (New York: Harper & Brothers, 1935), p. 78.

⁴ Wirth, Louis, “Urbanism as a Way of Life,” *American Journal of Sociology*, vol. XLIV, no. 1, pp. 1-24, July, 1938.

to which at any given time the population of a city is composed of immigrants or of native sons and daughters has cultural significance and thus significance with respect to the demand for land. To the extent that cities are self-reproducing, they move toward cultural homogeneity; on the other hand, cities that feed upon immigration present greater variety and change in the nature of the demand for land.

Table 8 gives an indication of the relative importance of immigration and net reproduction in accounting for the populations of a sample of American cities.

TABLE 8. RELATIVE IMPORTANCE OF VARIOUS SOURCES OF POPULATION GROWTH IN 43 AMERICAN CITIES, 1890-1930 *

Region	Origins of population increase, per cent				
	Total	Foreign-born	Colored migration	White migration	Excess of births over deaths
Northeast.....	100.0	11.20	21.73	20.79	46.28
South.....	100.0	1 27	23.28	58.13	19.86
West and Midwest. . .	100.0	18.58	14.25	53.89	50.44
Pacific Coast	100.0	9 52	3.00	78.03	9.45

* Weimer, Arthur, and Homer Hoyt, *Principles of Urban Real Estate* (New York: The Ronald Press Company, 1939), p. 25.

Natural Increase. It has already been pointed out that the high urban death rates of the past have declined sharply with advances in medical science and sanitation techniques and with the enforcement of health regulations. But the fall in urban mortality has been accompanied by a steady decline in the fertility of urban women; the urban population is not self-sustaining. This story of net reproduction rates for urban and rural areas in the United States from 1910 through 1940 is presented in Table 9.

Since a net reproduction rate of 1,000 would mean that each generation would just replace itself, it is clear that, even in the period from 1905 to 1910, the urban replacement rate was below that necessary to prevent a decline in population. By 1940, that rate had fallen so low that if the urban birth and death rates were to remain unchanged, and if the urban population were not supported by immigration from rural nonfarm or rural farm areas or from foreign sources, the urban population would

TABLE 9. NET REPRODUCTION RATES, URBAN AND RURAL: 1905-1910, 1930-1935, 1935-1940, AND 1941-1946 *

Area	Period			
	1905-1910	1930-1935	1935-1940	1941-1946
United States. . .	1,336	984	978	1,202
Urban.	937	747	726	976
Rural nonfarm . . .	1,499	1,150	1,150	1,359
Rural farm.	2,022	1,632	1,661	1,928

* U.S. Bureau of the Census, *Population—Special Reports*, Series P-1943, no. 5, Nov. 11, 1943; also *Current Population Reports*, Series P-20, no. 8, Dec. 31, 1947.

decrease by one-fourth in each generation.⁵ It is not yet clear whether the increase in the birth rate since 1940 is a temporary or more lasting reversal of the long-term trend. It is generally true that the rapid growth of cities, whenever it has occurred, has been mainly the result of population movements to urban areas from foreign lands or from farms and villages.

Foreign Immigration. Before the restrictions on foreign immigration, the cities witnessed an inflow of newcomers from abroad. Some of these immigrants found their way into the agricultural, mining, and lumbering areas of the Middle West, but the majority settled in the industrial cities of the East and in the Ohio Valley. Evidence of their numerical importance in cities is found in the proportion of foreign-born persons in urban areas as contrasted with that in the rural and farm areas. In 1930 almost two-thirds of the population in cities of 1 million and over were foreign-born or the children of foreign-born parents.⁶ These groups tend to decline in importance with the size of cities. Because of shutting off immigration, the number of foreign-born in urban areas declined by 2 million between 1930 and 1940, and the ratio to total urban population was reduced from 16.2 per cent to 12.4 per cent.⁷ Table 10 illustrates the extent to which the foreign-born are concentrated in our urban areas. It also indicates the degree to which the cessation of immigration has affected the flow of population from foreign sources to our urban areas.

⁵ U.S. Bureau of the Census, *Population—Special Reports*, Series P-1943, no. 5, Nov. 11, 1943.

⁶ National Resources Committee, *Our Cities* (Washington, D.C.: U.S. Government Printing Office, 1937), p. 9.

⁷ U.S. Census, 1940, *Population*, vol. II, part I, p. 20, Table 5.

TABLE 10. PERCENTAGE DISTRIBUTION OF WHITE POPULATION BY NATIVITY AND PARENTAGE FOR THE UNITED STATES, URBAN AND RURAL, 1930-1940 *

Nativity and parentage	Urban		Rural nonfarm		Rural farm	
	1930	1940	1930	1940	1930	1940
Total.	100.0	100.0	100.0	100.0	100.0	100 0
Native.	82.6	86.6	92.1	94 5	95.2	96.4
Native parentage..	52 9	61.5	75.4	81.2	81 6	85.9
Foreign or mixed parentage	29.7	25.1	16.6	13 3	13.6	10.5
Foreign-born.....	17.4	13.4	7.9	5.5	4.8	3 6

* U.S. Bureau of the Census, *Population—Special Reports*, Series P-15, no. 8, Feb. 12, 1943.

The data in Table 10 indicate the importance of foreign population sources in urban growth as well as their much lesser importance in rural populations. About 96 per cent of the farm white population was native-born in 1940 and 86 per cent were of native parentage; 87 per cent of the urban white population was native-born and 62 per cent were of native parentage. Looking at it another way, 13 per cent of the total urban white population in 1940 was foreign-born, and some 5.5 per cent of the rural nonfarm and 3.6 per cent of the farm white population was foreign-born in 1940. It is interesting that there seems to occur a downward gradation in the proportion of foreign-born as one leaves the urban areas.

Indicative of the degree to which restrictions on immigration have reduced the number of foreign immigrants coming into our cities, Table 10 indicates that, while in 1930 17.4 per cent of our urban white population was foreign-born, by 1940 this had dropped to 13.4 per cent. The proportion of the urban native white population with foreign or mixed parentage also fell between 1930 and 1940, while the percentage of native white population increased. The same story is repeated on a smaller scale with respect to the farm white population. It is apparent that recent trends are in the direction of an increasing proportion of whites of native parentage in the urban population.⁸

With urban reproduction rates at a low level and with foreign im-

⁸ McKenzie, R. D., *The Metropolitan Community* (New York: McGraw-Hill Book Company, Inc., 1933), p. 34.

migration practically stopped, the only remaining source for urban population maintenance or growth is the rural areas.⁹

Negroes in American Cities. Before discussing the role that the rural population must serve in preserving city populations, let us look at the role that the Negro population plays in city growth. The rapid urbanization of Negroes during recent decades has increased their numerical importance in cities (see Table 11). The heaviest migration has been to northern industrial areas, initiated by the shortages of labor during the First World War.¹⁰ The proportion of Negroes in American cities as a whole increased from 6.6 per cent of the 1920 urban population to 7.6 per cent in 1930 and 8.4 per cent in 1940. Between 1920 and 1930 the percentage of Negroes actually decreased in Southern cities and increased most substantially in the larger communities of the East, North Central, and Middle Atlantic states. Between 1930 and 1940, the increase continued in these last-mentioned areas, but the earlier decline in Southern cities was reversed. During the war period, ending in 1947, there was a small decline in the South and increases in all other regions.

TABLE 11. PER CENT OF NEGROES IN URBAN POPULATION BY DISTRICTS, 1920, 1930, 1940, AND 1947 *

Districts	1920	1930	1940	1947
United States.	6.6	7.6	8.4	10.7
New England	1.2	1.3	1.4	7.7
Middle Atlantic	3.1	4.7	5.4	
East North Central.....	3.4	5.1	5.6	7.8
West North Central	4.5	4.7	4.7	
South Atlantic...	26.4	25.7	32.8	23.0
East South Central	28.6	27.3	28.2	
West South Central	18.0	16.9	17.7	
Mountain	1.4	1.4	1.5	4.8
Pacific	1.2	1.4	1.8	

* U.S. Census, 1920, 1930, 1940 (Population); U.S. Bureau of the Census, *Population Reports*, P-20, no. 9, Jan. 19, 1948.

⁹ National Resources Committee, *Our Cities*, p. 56.

¹⁰ National Resources Committee, *The Problems of a Changing Population* (Washington, D.C.: U.S. Government Printing Office, May, 1938), p. 99.

TABLE 12. PER CENT OF CHANGE IN WHITE AND NONWHITE POPULATION OF 34 LEADING METROPOLITAN DISTRICTS, BY REGION, 1940-1947 *

Area	Per cent of increase	
	White	Nonwhite
West..	32.4	80.9
Mountain..	19.9	117.9
Denver..	20.7	104.5
Salt Lake City...	18.5	191.1
Pacific....	33.8	79.1
Los Angeles..	32.4	88.6
Portland..	30.9	68.3
San Francisco.....	38.1	66.2
Seattle...	32.4	56.3
North	6.7	48.0
New England...	7.4	33.3
Boston....	8.1	33.8
Lowell..	3.7	57.0
New Haven..	13.5	40.0
Worcester..	0.9	-30.0 †
Middle Atlantic..	6.5	44.2
Bethlehem...	3.1	144.7
New York..	6.0	50.2
Philadelphia..	13.6	38.5
Pittsburgh...	4.8	13.5
Rochester..	11.9	97.2
Scranton..	-14.6 †	-67.7 †
East North Central.....	5.9	54.4
Akron...	18.1	91.0
Chicago....	0.7	35.9
Columbus....	2.0	6.7
Detroit....	12.3	102.6
Toledo...	11.3	34.8
Youngstown	0.5	30.0
West North Central..	10.4	57.1
Minneapolis-St. Paul..	10.4	19.2
St. Louis.....	10.4	59.6
South.....	24.2	25.1
South Atlantic..	25.9	33.3
Atlanta	13.6	10.3
Baltimore	19.0	51.2
Norfolk..	48.5	30.5
Washington..	32.8	32.8
East South Central...	23.5	20.5
Birmingham..	22.9	23.6
Memphis...	24.3	16.9
West South Central...	21.5	10.5
Dallas.....	25.8	19.7
New Orleans	13.6	6.1
San Antonio...	31.6	18.5
Tulsa..	13.6	9.0

* Computed from U.S. Bureau of the Census, *Current Population Reports*, Series P-21, nos. 1-35, July 17, 1947, through Aug. 24, 1947.

† Decrease.

During the Second World War, a migration of Negroes occurred that was similar to that of the First World War. Labor requirements in war-production areas brought forth a substantial movement of rural Negroes to shipbuilding centers, powder plants, arsenals, and even to the aircraft plants of the West. Indicative of the growth of the nonwhite population in urban areas during the Second World War, Table 12 shows the percentage increase between 1940 and 1947 of the white and nonwhite population in 34 leading metropolitan districts in the United States.

The greatest relative increases in the nonwhite population occurred in the 6 metropolitan districts in the West and the 18 metropolitan districts in the North, while the nonwhite population increased the least in the 10 metropolitan districts of the South. The huge percentage increases in Denver and Salt Lake City are somewhat misleading, since the absolute increases were small. The actual nonwhite population in 1947 was only 4,830 in Salt Lake City, a numerical increase of but 3,171 over a 1940 nonwhite population of 1,659; in Denver the numerical increase was 9,419 over a 1940 nonwhite population of 9,017.

The nonwhite population in 34 leading metropolitan districts in 1940 and 1947 as a percentage of the total population in each year is presented in Table 13. The data indicate that an increase in the relative proportion of nonwhites to the total population occurred in all but 11 of the 34 metropolitan districts and that of the 11 areas in which the nonwhite population declined during the period, 7 were located in the South.

Although many of our Northern and Western cities have gained in Negro population during the war, it would seem safe to assume that at least a majority of these came from rural areas and are thus part of the rural source for urban population growth. Our basis for this assumption is twofold. First of all the reproduction rates for urban Negroes are low and, secondly, in 1940, almost one-half (42.3 per cent) of all the Negroes in the United States were engaged in agricultural pursuits.¹¹

Rural-urban Migration. Indications of the degree to which urban areas are dependent upon rural migration for their growth are found in Table 14, which shows what one population expert estimates the urban population would be if this rural-urban migration were stopped. The estimate is that by 1950 the urban population would actually decrease if there were no migration.

During the 1920's some 19 million persons moved to towns and cities from rural areas, while some 13 million moved from towns and cities to farms, with the result that farms suffered a net loss to cities of about

¹¹ U.S. Bureau of the Census, *Population—Special Reports*, Series P-1943, no. 4, Table VI, Nov. 4, 1943.

TABLE 13. PER CENT OF NONWHITE POPULATION IN TOTAL POPULATION
IN 34 METROPOLITAN DISTRICTS, 1940 AND 1947 *

Metropolitan district	1940	1947
West		
Mountain		
Denver	2.3	3.9
Salt Lake City	0.8	2.0
Pacific		
Los Angeles	4.4	6.1
Portland	1.6	2.1
San Francisco	4.3	5.1
Seattle	4.2	4.0
North		
New England		
Boston	1.6	2.0
Lowell	0.2	0.4
New Haven	2.8	3.4
Worcester	0.5	0.4
Middle Atlantic		
Bethlehem	0.5	1.3
New York	5.8	8.0
Philadelphia	10.9	13.0
Pittsburgh	5.8	6.2
Rochester	0.9	1.5
Scranton	0.3	0.1
East North Central		
Akron	4.1	6.5
Chicago	7.3	9.6
Columbus	10.5	9.4
Detroit	7.5	13.2
Toledo	4.5	5.3
Youngstown	6.2	7.9
West North Central		
Minneapolis-St. Paul	1.1	1.2
St. Louis	11.0	15.1
South		
South Atlantic		
Atlanta	29.3	28.7
Baltimore	18.0	21.8
Norfolk	32.8	30.1
Washington	23.7	23.7
East South Central		
Birmingham	41.6	41.7
Memphis	42.1	43.2
West South Central		
Dallas	15.7	15.0
New Orleans	29.1	27.7
San Antonio	6.7	6.1
Tulsa	10.9	10.5

* Computed from U.S. Bureau of the Census, *Current Population Reports*, Series P-21, nos. 1-35, July 17, 1947, through Aug. 24, 1947.

TABLE 14. URBAN POPULATION FOR UNITED STATES 1930 AND 1940 WITH ESTIMATES FOR 1950 AND 1960 *
(in thousands)

Year	Rural-urban migrants included			Rural-urban migrants not included		
	Urban population	Increase		Urban population	Increase	
		Number	Per cent		Number	Per cent
1930	69,180.1	14,663.8	27.0	69,180.1	14,663.8	27.0
1940	76,038.8	6,858.7	9.9	70,785.0	1,604.9	2.3
1950	80,861.7	4,822.9	6.3	70,657.6	-127.4	-1.8
1960	82,436.3	1,574.6	1.9	68,548.7	-2,108.9	-3.0

* Thompson, Warren S., and P. K. Whelpton, *Estimates of Future Population by States*. A series of tables prepared for the National Resources Planning Board (Washington, D.C.: U.S. Government Printing Office, 1934). Includes allowance of 4 per cent for underenumeration by the census of children under five years of age.

6 million persons. During the decade of the 1920's, nearly two out of every five of the young people from the rural areas who had reached their twentieth birthday during the decade had moved to cities by 1930.¹² Late in the 1920's migration to cities slowed down and after 1929 sharper reductions occurred in this movement. There are indications that between 1930 and 1940, years which included the depression and the war upswing, the net migration from farms to towns and cities was under 2.5 million.¹³ Another source estimated the net cityward movement from 1934 to 1940 at more than 500,000.¹⁴

The net movement from farms to urban areas for various periods is shown in Table 15.

TABLE 15. NET FARM-CITY MOVEMENTS

Period	Persons
1920-1924	3,331,000
1925-1929	2,695,000
1930-1934	598,000

* Bureau of Agricultural Economics, *Farm Population Estimates* (Washington, D.C.: U.S. Government Printing Office, Oct. 27, 1936).

¹² Baker, O. E., and Conrad Taeuber, "The Rural People," *1940 Yearbook of Agriculture* (Washington, D.C.: U.S. Government Printing Office, 1940), p. 841.

¹³ *Ibid.*, p. 842.

¹⁴ U.S. Bureau of the Census, *Internal Migration, 1935 to 1940*, p. 4, Table II.

Table 9 indicated the role that rural areas can play in the growth of cities. Although the net reproduction rates in rural areas have been declining since 1905, the rural population by 1940 was still able to more than reproduce itself. Compared with the urban net reproduction rate of 726, that in rural nonfarm areas was 1,150 and that in the rural farm areas was 1,661. One student of rural population growth maintains that during the 20 years ending in 1955, the total population of working age (18 to 65) in the nation will increase by about 14.5 million people. If there were no migration during this period some 3 million of these persons would be in cities, 4 million in rural nonfarm areas and nearly 7.5 million, or fully half of the total, on farms. This authority points out that prospective needs for agricultural production could be filled without drawing upon any of these 7.5 million. Thus, this 7.5 million will be available for migration to urban areas.¹⁵

It is estimated that during the war about 5.4 million civilians moved from farms to cities and other nonfarm areas. This exodus was partly offset by a shift to farms from nonfarm areas amounting to about 2.5 million, leaving the nonfarm areas a gain of 2.9 million. The net gain of civilians from farm areas to cities thus averaged about 900,000 per year between 1941 and 1945. This figure may be compared with an average of 375,000 persons annually in the 1930's and an average of 630,000 per year in the 1920's.¹⁶

Table 16 presents a picture of the changes in the farm population that took place between April, 1940, and January, 1947.

TABLE 16. PER CENT OF CHANGE IN FARM POPULATION, 1940-1947 *

Date	Increase or decrease since preceding date	Increase or decrease since April, 1940
1940		
1944	-16.5	-16.5
1945	-1.3	-17.5
1946	+6.6	-12.1
1947	+2.6	-9.8

* U.S. Bureau of the Census, *Farm Population: January, 1947*, Series Census BAE, no. 10, Aug. 18, 1947.

A comparison of the total urban and rural populations of the United States in 1940 and 1946 is presented in Table 17.

¹⁵ Baker and Taeuber, *op. cit.*, p. 840.

¹⁶ U.S. Bureau of the Census, *Shifts in Farm Population*, December, 1941, to March, 1945, Series P-6, no. 6.

TABLE 17. URBAN AND RURAL POPULATION IN THE UNITED STATES, 1940 AND 1947 *
(in thousands)

Area	1940		1947		Per cent of change, 1940-1947
	Number	Per cent	Number	Per cent	
United States.....	130,323	100.0	142,061	100 0	+7.9
Urban.....	73,830	56.7	83,860	59.0	+12.7
Rural.....	56,493	43.3	58,201	41 0	+1.7
Rural nonfarm.....	26,428	20.3	30,896	21.8	+14.3
Rural farm.....	30,065	23.1	27,305	19.2	-9.6

* U.S. Bureau of the Census, *Current Population Reports*, Series P-20, no. 9, Jan. 19, 1948. Civilian population, April, 1947, and total population, April, 1940.

Our data show that the urban population had increased 11.3 per cent between 1940 and 1946, while the rural farm population had decreased 8.2 per cent. In 1946, 60.0 per cent of the total population of the United States was located in urban areas. Since the total increase in the population of the United States between 1940 and 1946 amounted to only 5.1 per cent and since the rural farm population declined by 8.2 per cent while at the same time the population of the urban areas increased by 11.3 per cent, most of the population increase in urban areas must have been recruited from the farms.

Migration to cities has been going on since the urbanization of this country got under way, with the result that a large proportion of the present urban population has a rural background. The manifestations of rural origins are found throughout the entire scale of values, for example, in the common urge of many city folks to seek recreation and relief in open spaces, to make week-end trips into the country, or to cultivate flower gardens and vegetable plots.

Population Characteristics

Before indicating the role which these population sources play in the demand for urban land, let us briefly indicate some of the chief characteristics of the urban population. This can best be done by contrasting the following characteristics of the urban population with that of the rural: sex, age, marital status, family composition, educational attainment, occupations.

Sex. In general, cities contain more women than men. In 1940 there were 95.3 males for each 100 females, in all urban areas. In the largest

cities to which many foreign-born males have migrated and where there is a preponderance of occupations requiring more males than females, the ratio of males to females is higher than in the smaller sized cities.¹⁷

Table 18 presents the number of males per 100 females in urban areas of different sizes and in rural areas in 1940.

TABLE 18. NUMBER OF MALES PER 100 FEMALES IN URBAN PLACES CLASSIFIED BY SIZE AND IN RURAL AREAS IN THE UNITED STATES, 1940 *

Area	Males per 100 Females
United States	100 7
Cities of 100,000 or more	96.1
Urban places of 10,000-100,000	94 6
Urban places of 2,500-10,000	95.8
Rural nonfarm	103.7
Rural farm	111.7

* U S Bureau of the Census, *Special Population Reports*, Series P-10, no. 21, Mar. 5, 1943.

Table 18 indicates that the rural areas contain more men than women and that this preponderance is heaviest in the rural farm areas. In rural farm areas there were 111.7 males for every 100 females, while in urban places of 10,000 to 100,000 there were only 94.6 males for every 100 females. The higher ratio in the largest cities is probably a reflection of a greater importance of occupations requiring male workers.

Age. Cities are characterized by a larger proportion of persons of middle age and a smaller proportion of both children and aged than is found in rural areas. This difference is most pronounced in the larger cities. In 1930, the ratio of persons under 20 years of age to those between 20 and 55 ranged from 58 in the large cities upward to 67 for small cities. In villages of less than 2,500 persons this ratio was 76 and on farms 116.¹⁸

The ratio of persons over 55 years of age to the middle-aged also increased inversely to the size of city, ranging from 19 to 28 in 1930. Comparable ratios were 29 for the farm population and 44 for inhabitants of agricultural villages.

Table 19 shows the median age in urban places of different sizes and in rural areas in 1940. The data indicate rather clearly the preponderance of youth in the rural farm areas and the preponderance of middle-aged people in cities. It is interesting to note that there is a

¹⁷ National Resources Committee, *Our Cities*, p. 9.

¹⁸ Ogburn, William F., *Social Characteristics of Cities* (Chicago: International City Managers' Association, 1937), pp. 1ff.

continuous downward gradation in the age of the population as we go from the more densely to the less densely populated areas.

TABLE 19. MEDIAN AGE OF THE POPULATION IN URBAN PLACES CLASSIFIED BY SIZE AND IN RURAL AREAS IN THE UNITED STATES, 1940 *

<i>Area</i>	<i>Median Age</i>
United States	29.0
Cities of 100,000 or more	31.8
Urban places of 10,000-100,000	30.8
Urban places of 2,500-10,000	29.5
Rural nonfarm	27.7
Rural farm	24.4

* U.S. Bureau of the Census, *Special Population Reports*, Series P-10, no. 21, Mar. 5, 1943.

Marital Status. Single life for the female population seems more prevalent in cities than in rural areas.¹⁹ While 28.8 per cent of the urban female population 14 years old and older were single in 1940, 26.8 per cent of the rural female population 14 years of age and older were single. In 1947, a year when our data are influenced by war conditions, 23 per cent of the female urban population was single compared to 21.8 per cent of the rural farm female population. These data on marital status are presented in Table 20. The table also indicates that our cities contain more persons who are widowed or divorced than do our rural areas, for, while 5.1 per cent of the rural farm males and 9.1 per cent of the rural farm female population 14 years old and over were widowed or divorced in 1940, 5.6 per cent of the urban male and 14.2 per cent of the urban female population 14 years old and over were widowed or divorced. The same relationships are evident in the 1947 data.

That there are relatively more divorced persons in the urban population than in the rural is indicated by the proportions of the white population 15 years and over located in urban and rural areas who were divorced in 1940. The ratios for urban males and females were 1.5 and 2.2 per cent; the corresponding ratios for rural persons were 0.8 and 0.7 per cent.

Family Composition. Urban families are smaller than farm families. In 1940 the median size was 3.0 persons in cities and 3.71 for rural farm families. The comparable figures in 1930 were 3.26 and 4.02.²⁰ Table 21 reveals a shift toward smaller families between 1930 and 1940.

Another measure of significance is size of household, or the natural family plus lodgers, hired hands, servants, and related family members.

¹⁹ National Resources Committee, *Our Cities*, p. 12.

²⁰ U.S. Census, 1940, *Population, Families*, p. 4, Table IV.

TABLE 20. PERCENTAGE DISTRIBUTION OF PERSONS FOURTEEN YEARS OLD AND OVER BY MARITAL STATUS FOR THE UNITED STATES, URBAN AND RURAL FARM, 1940 AND 1947 *

Marital status	1940				1947			
	Male		Female		Male		Female	
	Urban	Rural farm	Urban	Rural farm	Urban	Rural farm	Urban	Rural farm
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Single	34.0	38.4	28.8	26.8	27.5	33.7	23.0	21.8
Married	60.5	56.5	57.0	64.1	66.6	60.9	61.5	68.7
Widowed or divorced	5.6	5.1	14.2	9.1	5.9	5.4	15.5	9.5

* U.S. Bureau of the Census, *Current Population Reports*, Series P-20, no. 10.

TABLE 21. PERCENTAGE DISTRIBUTION OF URBAN FAMILIES IN THE UNITED STATES BY NUMBER OF PERSONS, 1930 AND 1940 *

Number of persons	1930	1940
All families	100.0	100.0
1 person	8.0	11.1
2 persons	25.1	27.5
3 persons	22.1	22.9
4 persons	18.1	17.7
5 persons	11.6	10.0
6 persons	6.8	5.3
7 persons	3.8	2.7
8 persons	2.1	1.4
9 persons or more	2.3	1.5

* U.S. Census, 1930 and 1940.

In 1940 the median size of household was 3.16 persons in urban areas as compared with 3.0 persons as the median size of family. The median-size household was found to be greater in small cities than in large cities, greater outside metropolitan districts, and greater in rural areas than in urban areas.²¹

Educational Status. It is well known that rural educational facilities are less adequate than urban. It is not surprising, therefore, that, as of 1940, only 7.6 per cent of the rural farm population 25 years old and over had completed high school as compared with a figure of 16.6 per cent of the urban population in that age category; and only 1.3 per cent of the rural farm population 25 years old and over had completed 4 or more years of college as compared with 5.7 per cent of the urban population in that age category (see Table 22).

TABLE 22. PERCENTAGE DISTRIBUTION OF PERSONS TWENTY-FIVE YEARS OLD AND OVER, BY YEARS OF SCHOOL COMPLETED, URBAN AND RURAL, 1940 *

Years of school completed	United States	Urban	Rural nonfarm	Rural farm
Persons 25 years old and over	100.0	100.0	100.0	100.0
No school years completed...	3.7	3.6	3.4	4.7
Grade school:				
1 to 4 years.....	9.8	7.7	10.2	15.7
5 and 6 years.	11.4	9.9	11.9	15.5
7 and 8 years.....	34.6	33.3	34.7	38.7
High school:				
1 to 3 years.....	15.0	15.9	15.2	11.8
4 years.....	14.1	16.6	12.9	7.6
College:				
1 to 3 years	5.4	6.0	5.7	3.4
4 years or more.....	4.6	5.7	4.2	1.3
Not reported.....	1.4	1.3	1.7	1.3

* U.S. Census, 1940, *Population*, vol. II, part I, Table 13.

Occupations. The types of occupations of urban dwellers vary markedly in proportion among cities of different economic backgrounds. There

²¹ U.S. Bureau of the Census, *Housing—Special Reports*, Series H-44, no. 5, Dec. 30, 1944.

are, however, certain general classes of occupation that are characteristic of cities—manufacturing, trade, transportation and communication, clerical service, personal and domestic service, and the professions. “The large cities are turning more and more of their energies into commercial and service channels with a consequent diminution of the importance of their manufactures.”²²

Indicative of this shift in the occupations of urban dwellers are the data for cities of 250,000 and over presented in Table 23. Although the data apply only to 1920 and 1930, the tendency is evident.

TABLE 23. PER CENT OF THE GAINFULLY EMPLOYED ENGAGED IN CERTAIN GROUPS OF INDUSTRIES IN THE CITIES OF 250,000 AND OVER (1930), 1930 AND 1920 *

City	Manufacturing and mechanical industries		Transportation		Trade		Clerical		Other †	
	1930	1920	1930	1920	1930	1920	1930	1920	1930	1920
New York, N.Y. . .	32.0	37.6	9.3	9.5	17.4	15.5	16.8	15.9	24.2	21.1
Chicago, Ill. . .	36.2	39.7	9.2	9.0	17.0	16.8	16.4	17.1	21.0	17.1
Philadelphia, Pa. . .	40.2	47.5	8.6	8.1	15.6	13.5	12.7	12.2	22.3	18.2
Detroit, Mich. . .	48.5	56.3	6.9	6.2	13.9	11.4	11.3	12.1	19.0	13.7
Los Angeles, Calif. . .	26.2	31.6	7.4	8.6	21.8	18.6	12.9	11.4	28.4	25.2
Cleveland, Ohio. . .	44.3	52.9	9.5	7.3	13.8	12.5	12.0	12.4	19.8	14.4
Boston, Mass. . .	32.0	37.0	10.0	10.0	16.1	15.1	14.6	14.4	26.3	23.0
Pittsburgh, Pa. . .	34.4	40.1	10.1	10.1	16.9	15.0	14.1	14.5	23.8	19.8
San Francisco, Calif. . .	27.1	30.9	10.6	10.1	18.5	16.3	16.1	14.2	26.5	26.7
Milwaukee, Wis. . .	46.3	51.9	7.8	7.2	14.8	12.6	13.0	12.9	17.5	14.9
Washington, D.C. . .	19.1	18.9	7.6	7.1	13.4	9.7	21.8	30.9	37.5	33.0
Minneapolis, Minn. . .	30.0	34.6	9.5	10.2	19.6	18.8	16.1	15.1	23.7	19.9
New Orleans, La. . .	26.5	32.0	13.8	14.2	16.8	14.5	12.6	11.8	29.1	26.3
Seattle, Wash. . .	29.5	36.9	9.5	10.5	19.7	16.5	13.4	11.1	24.6	21.0
Houston, Tex. . .	29.5	30.2	10.7	11.8	17.3	16.0	13.4	14.5	27.6	25.6
Columbus, Ohio . .	32.8	40.1	11.1	10.9	16.9	15.1	12.0	12.0	26.4	21.3
Denver, Colo. . .	25.7	28.2	9.3	10.7	20.3	19.5	14.7	14.0	27.0	23.2
Atlanta, Ga. . .	24.7	27.7	8.5	10.5	17.4	16.7	14.7	14.4	34.2	30.0
Dallas, Tex. . .	25.2	24.9	8.0	9.9	21.3	21.9	16.6	17.7	27.7	24.1
Birmingham, Ala. . .	29.7	35.0	10.1	11.1	16.4	14.2	10.1	9.1	30.1	26.0
Akron, Ohio. . .	52.5	65.9	6.1	3.7	13.5	8.9	9.7	9.8	17.5	11.3
Memphis, Tenn. . .	27.7	28.2	10.2	12.2	18.2	18.6	11.2	10.6	31.4	28.6
Providence, R.I. . .	44.4	53.1	7.2	7.1	14.9	12.4	11.5	10.7	21.3	16.4

* National Resources Committee, *Population Statistics, Urban Data*, p. 12, Table 5.

† Includes public service, professional service, and domestic and personal service.

Social Variations among Cities

The social aspects of the city are receiving our attention because of the close relationship between the demand for the services of real estate

²² National Resources Committee, *Population Statistics, Urban Data* (Washington, D.C.: U.S. Government Printing Office, October, 1937), p. 12.

and population growth, population characteristics, and the urban way of living. We have been discussing the general nature of urban population as distinguished from rural population. There are, also, important social differences among cities, which give rise to differences in both the quantity and the quality of the demand for land. These differences are of economic origin, but are reflected in the rate of growth and in the social characteristics of the population. A few examples of city differences will illustrate this principle and point out some of the important social variations that may occur.

In Table 24 are presented some comparative social statistics on four cities selected for their diversified economic backgrounds. St. Petersburg, Fla., is a resort city, a favorite of the aged and infirm; Washington, D.C., is the locus of an army of governmental employees; Detroit, Mich., is famous as the center of the automobile industry; and Fall River, Mass., is a textile center. The rate of growth varies widely among the cities. The discovery of Florida as a resort center is reflected in the rapid expansion of St. Petersburg, while the healthy growth of Detroit derives from the widening use of automobiles and trucks. On the other hand, Fall River declined in population through the shifting of the textile industry to the South.

An excess of females over males is found in St. Petersburg, for women live longer than men; in Washington, where there are unusual economic opportunities for women clerks and stenographers; and in Fall River, where the textile mills employ large numbers of female operatives. Detroit shows an excess of men over women because of the great influx of single men looking for work in the mechanical industries.

The racial distribution shows the effect of foreign immigration to the industrial centers of Detroit and Fall River. The age distribution reflects the presence of the aged seeking refuge in Florida, and the young men from farms and villages seeking jobs in the growing automobile industry in Detroit. Small families are characteristic of the resorters in St. Petersburg and of the clerks in Washington, while the industrial cities contain more of the larger families.

The data on occupations show that only 46.7 per cent of all persons over ten years of age in St. Petersburg are gainfully employed, as compared with 54 per cent and 58 per cent in the other cities. Of those employed, the proportion of those in trade and in the service groups is large in St. Petersburg. In Washington, the clerical occupations are uniquely important, while in the two manufacturing centers, the industrial group predominates.

TABLE 24. COMPARATIVE POPULATION CHARACTERISTICS SHOWING RATE OF GROWTH, SEX RATIO, RACIAL DISTRIBUTION, AGE DISTRIBUTION, FAMILY SIZE, AND OCCUPATIONAL DISTRIBUTION FOR ST. PETERSBURG, FLA., WASHINGTON, D.C., DETROIT, MICH., AND FALL RIVER, MASS., 1930 *

Item	St Petersburg		Washington		Detroit		Fall River	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Population Growth								
1910	4,127		331,069		465,766		119,295	
1920	14,237		437,571		993,678		120,485	
Percentage increase		245.0		32.2		113.3		1.0
1930.	40,425		486,869		1,568,662		115,274	
Percentage increase		183.9		11.3		57.9		-4.3
Sex ratio, females per 100 males		113.6		110.0		90.9		109.1
Racial Distribution.								
Total		100.0		100.0		100.0		100.0
Native white	30,499	75.4	323,982	66.5	1,040,860	66.4	82,689	71.7
Foreign-born white	2,473	6.1	29,932	6.2	399,281	25.5	32,078	27.8
Negro	7,416	18.3	132,068	27.1	120,066	7.7	382	0.3
Other races	37	0.2	887	0.2	8,455	0.4	125	0.2
Age Distribution.								
Total		100.0		100.0		100.0		100.0
Under 5 years	2,563	6.3	32,304	6.6	146,610	9.3	10,315	8.9
5-19 years	8,963	22.2	104,152	21.4	404,535	25.8	35,377	30.7
20-44 years	15,137	37.4	221,515	45.5	758,161	48.3	41,235	35.8
45-64 years	9,393	23.2	99,873	20.5	215,999	13.8	21,881	19.0
65 and over	4,311	10.7	27,253	5.6	42,316	2.7	6,418	5.5
Unknown	58	0.2	1,782	0.4	1,041	0.1	48	0.1
Size of Family.								
Total	12,688	100.0	125,554	100.0	370,293	100.0	27,001	100.0
1 person	1,893	14.9	16,609	13.2	21,012	5.7	1,963	7.3
2 persons	4,558	35.9	36,599	29.2	90,307	24.4	5,485	20.3
3 persons	2,602	20.6	26,422	21.0	82,681	22.3	5,353	19.8
4 persons	1,665	13.1	19,542	15.6	70,488	19.0	4,627	17.1
5 persons	941	7.4	11,753	9.4	46,351	12.5	3,423	12.7
6 persons	507	4.0	6,644	5.3	27,432	7.4	2,407	8.9
7 persons	294	2.3	3,574	2.8	15,246	4.1	1,464	5.4
8 or more persons	116	0.9	2,034	1.6	8,283	2.3	968	3.6
Median size	2.48		2.86		3.39		3.65	
Occupational Distribution								
Percentage of population								
10 years old and over who are gainfully employed		46.7		58.2		54.1		54.7
Total gainfully employed	16,250	100.0	243,853	100.0	689,489	100.0	50,571	100.0
Agriculture	360	2.2	1,081	0.4	1,750	0.3	401	1.2
Forestry and fishing	111	0.7	56		70		14	
Extraction of minerals	10	0.1	84		388	0.1	20	0.1
Manufacturing and mechanical industries	3,434	21.1	46,658	19.1	334,662	48.5	31,518	62.0
Trade	3,625	22.3	32,656	13.4	95,727	13.9	5,719	14.5
Public service	875	4.2	13,818	5.7	16,654	2.4	1,020	3.0
Professional service	1,633	10.0	27,169	11.1	42,866	6.2	3,109	3.2
Domestic and personal service	4,124	25.4	50,482	20.7	71,547	10.4	3,422	4.5
Clerical occupations	1,199	7.4	53,258	21.8	78,122	11.3	2,758	4.1
Transportation and communication	1,079	6.6	18,591	7.6	47,703	6.9	2,590	7.4

* U.S. Census, 1920 and 1930.

Dynamics of Population

The fact that the rate of population growth in the United States is declining carries important implications concerning the future changes in urban population and hence the future demand for the services of urban land. The annual increase in total population has been declining as the result of a number of forces. The birth rate has been falling for more than a century, with the fall accelerated during the last 10 to 15 years prior to the Second World War. The total annual number of births reached a peak between 1921 and 1925 and has declined since that time to the present temporary postwar spurt, which will keep the birth rate above normal for a few years. While the survival rate has improved, this change has not been sufficient to offset the decrease in fertility, and it appears probable that the excess of births over deaths will continue to decline for some time. Finally, the restriction of immigration has stifled what was formerly an important source of population recruitment.

Estimates have been made of the future national population under various assumptions of fertility, mortality, and immigration. The medium estimates, shown in Table 25, illustrate the probable decline in the rate of increase. The data suggest that the total population in 1980 will

TABLE 25. ESTIMATED NUMBER AND PER CENT OF PERSONS IN THE UNITED STATES IN SPECIFIED AGE CLASSES, 1930-1980

HYPOTHESIS: MEDIUM FERTILITY, MEDIUM MORTALITY, NO IMMIGRATION *
(in thousands)

Year	Total population		Age classes									
			0-4		5-19		20-44		45-64		65 and over	
	Num- ber	Per cent	Num- ber	Per cent	Num- ber	Per cent	Num- ber	Per cent	Num- ber	Per cent	Num- ber	Per cent
1930	123,464	100.0	12,143	9.8	36,192	29.3	47,059	38.1	21,431	17.4	6,639	5.4
1935	127,983	100.0	10,912	8.5	36,370	28.4	49,374	38.6	23,845	18.6	7,482	5.9
1940	132,628	100.0	11,031	8.3	35,052	26.4	51,396	38.8	26,730	20.2	8,419	6.3
1945	137,096	100.0	11,197	8.2	33,377	24.4	54,273	39.6	28,517	20.8	9,732	7.0
1950	141,213	100.0	11,181	7.9	32,539	23.1	56,030	39.7	30,258	21.4	11,205	7.9
1955	144,733	100.0	10,884	7.5	32,842	22.7	55,810	38.6	32,369	22.4	12,828	8.8
1960	147,611	100.0	10,538	7.1	32,721	22.2	55,199	37.4	34,335	23.3	14,818	10.0
1965	149,957	100.0	10,302	6.9	32,090	21.4	54,396	36.3	36,822	24.5	16,347	10.9
1970	151,783	100.0	10,156	6.7	31,237	20.6	53,094	35.0	39,301	25.9	17,995	11.8
1975	153,044	100.0	10,042	6.6	30,530	19.9	52,098	34.0	40,366	26.4	20,008	13.1
1980	153,628	100.0	9,906	6.5	30,046	19.6	51,818	33.7	39,807	25.9	22,051	14.3

* National Resources Committee, *The Problems of a Changing Population* (Washington, D.C., U.S. Government Printing Office, 1938), p. 25, Table 3, Hypothesis B.

be between 150 and 160 million, an increase of some 30 million in 50 years, and that this nation will then be approaching a point of population stabilization or actual decline.

It has already been pointed out that the urban areas of the country will probably continue to grow at a faster rate than the population as a whole. But there will come a time when even the cities will stabilize, a situation of considerable impact on urban land use. There will continue to be internal shifts and successions of use, rebuilding, and even an expanding of the boundaries of the city as the inhabitants seek to spread out. But the changes will take place more slowly and will be more predictable. Planning will be more practicable, and a greater stability of urban land values will ensue.

With respect to urban housing, the number of families in the future population is of more significance than the number of persons. Table 26 presents a forecast in terms of number of private families. By 1980, the number will be some 16 million more than in 1940, but the rate of increase will have fallen to a low point.

TABLE 26. ESTIMATED NUMBER OF PRIVATE FAMILIES IN THE UNITED STATES 1900-1980 *

HYPOTHESIS: MEDIUM FERTILITY, MEDIUM MORTALITY, NET IMMIGRATION 100,000 PER YEAR AFTER 1940

<i>Year</i>	<i>Number</i>
1900	15,963,965
1910	20,100,235
1920	24,258,312
1930	29,904,663
1935	31,982,200
1940	34,367,600
1945	36,930,500
1950	39,524,800
1955	41,814,100
1960	43,883,400
1965	45,863,400
1970	47,624,000
1975	49,173,600
1980	50,327,700

* National Resources Committee, *The Problems of a Changing Population*, p. 25, Table 4, Hypothesis C.

An estimate made in 1947, in light of such new factors as the war, predicts a very rapid postwar increase in families and a total by 1960 of 44.8 million families as compared with a figure from Table 26 of 43,833,400 for that year (Table 27).

Concomitant with a decline in the rate of population growth is a change in the proportions of persons of various ages. The decline in

TABLE 27. FAMILY TRENDS IN THE UNITED STATES, BY SELECTED YEARS *
(in millions)

Year, July 1	Estimated number of families	
	Census concept †	Social families ‡
1930	29.9	31.3
1931	30.2	31.8
1932	30.4	32.2
1933	30.7	32.7
1934	31.2	33.3
1935	31.8	34.0
1936	32.3	34.7
1937	32.9	35.4
1938	33.5	36.0
1939	34.2	36.7
1940	35.1	37.5
1941	35.9	38.4
1942	36.5	39.4
1943	36.9	40.2
1944	37.1	40.8
1945	37.5	41.3
1950	40.9	
1955	42.9	
1960	44.8	

* Hauser, P. M., and A. J. Jaffe, "The Extent of the Housing Shortage" in Duke University *Law and Contemporary Problems*, vol. XII, no. 1, p. 6, Winter, 1947. Estimates of census families based on data prepared by Bureau of the Census, estimates of social families derived from data of Public Health Service and Bureau of the Census.

† Roughly equivalent to number of private households or occupied dwelling units.

‡ Census families plus additional married couples living as subfamilies in private households or in quasi households. For years 1940 to 1945 social families include families of members of the armed forces, even though the husbands were absent from home.

fertility is reducing the number of infants born, while improvements in conditions affecting health are increasing the proportion of persons who reach maturity and survive to more advanced ages. Table 25, based on medium assumptions, shows the actual and projected national age distribution from 1900 to 1980. The data illustrate the fact that the proportion of children is decreasing while the proportion of aged persons is

growing. By 1980 we shall have substantially fewer persons below 20 years of age than at present and nearly twice as many persons above 45. A trend of this kind will influence the demand for the services of urban land in a number of ways. There will be changes in the pattern of retail sales, in the occupational distribution, and in requirements for leisure-time and other facilities for older folks. We may expect an increasing migration of older persons to the milder climates of the South and the West Coast, as well as larger seasonal movements to escape the rigors of northern winters. Other important changes will accompany the maturing of the population. An increase in the proportion of females is to be expected with repercussions at many points. The decline in the proportion of foreign-born and the assimilation of their children into the population body will induce a greater cultural uniformity and do away with foreign settlements in urban areas.

It is apparent that long-term forecasts of demand in the urban land market must take into account the dynamic aspects of the population. These changes are more predictable and probably less disturbing than the changes in demand that will result from the great technological advances of the future.

*The Urban Way of Life*²³

It is the plan of this section to examine certain aspects of the behavior pattern of urbanites that may affect the demand for the services of real estate. We are interested in those social and cultural facts which may be reflected in the scale of economic values assigned by individuals and groups to the numberless goods and services that are available to them. In brief, we are to examine some of the basic cultural characteristics that have a bearing on how urbanites spend their money.

It has been said that the most significant feature of urban society is its heterogeneity—the social and economic diversification of individuals, groups, functions, and institutions. Closely associated with heterogeneity and interdependent with it are the characteristics of large numbers, density, and mobility. Some of the implications of these aspects of our urban culture will be briefly discussed.

Our cities are the loci of large numbers of persons sharing a limited territory in the process of living. (The term "large numbers" is used only in a relative sense.) The larger the population the greater the range in personal differences, in individual traits and cultural backgrounds. Contacts are impersonal and transitory, secondary rather than primary. Although each individual may be acquainted with a great many others, he

²³ Much of the material under this heading has been adapted from the excellent article on "Urbanism as a Way of Life," by Louis Wirth, *op. cit.*

does not know them well. This lack of intensity in personal relationships tends to create an attitude of reserve and indifference. The individual anonymity in large cities inhibits the sense of participation in community life that is frequently found in smaller communities.

The density of population that characterizes our urban places enforces close physical contacts between persons even though social contacts may be distant. The frequent movements of large numbers result in frictions and irritations. The process of living and working within a confined area in the absence of sentimental ties or group loyalties fosters a spirit of competition and mutual exploitation. It leads to conspicuous consumption as a means of securing recognition and approval. The physical proximity of large numbers of persons leads to the development of specialization in occupational, business, and institutional functions. In turn, this type of diversification increases the complexity of the social structure. It encourages the physical separation of economic and social functions into specialized areas—residential, retail, industrial, recreational. One of the significant consequences of the development of functional areas is the sometimes wide separation of place of work from place of residence.

Sociologists distinguish between fluidity and mobility.²⁴ Fluidity refers to the frequency and ease of physical movement without change in social or economic status; for example, the movement of groups to and from between their homes and place of work. Certainly fluidity is characteristic of urban populations and is made possible by modern transportation facilities. The mobility that typifies city life may be either spatial or social or both; but the term has been reserved to express movement that results in a change in status or environment. Thus, city people make relatively frequent changes in their jobs or in the location of their homes and are free in moving from city to city. Such changes involve a new set of socioeconomic relationships and require readjustments that are disturbing both to the individual and to the community. Physical mobility is frequently accompanied by social mobility, involving changes in standards of living and in social position.²⁵ In general, the relatively high degree of mobility that characterizes urbanites is concomitant with the absence of sentimental ties between the individual and his environment. Mobility retards the development of a community consciousness and encourages individualistic behavior.

Large numbers, density, and mobility are accompaniments if not causal factors of heterogeneity or diversification in the urban popula-

²⁴ McKenzie, Roderick D., in *The Urban Community*, ed. by Ernest W. Burgess (Chicago: University of Chicago Press, 1925), p. 169.

²⁵ Gist, Noel P., and L. A. Halbert, *Urban Society* (New York: The Thomas Y. Crowell Company, 1933), p. 269.

tion. Diversification is manifested in incomes, occupations, cultural backgrounds, social status, customs, habits, preferences, prejudices. It arises from the division of labor, the specialization of function that has necessitated the recruitment of variant types to perform the diverse tasks in the urban economy. It is a resultant of the multifarious racial and cultural backgrounds of the migrants from farms and villages, from other cities, and from abroad, who are the raw material of urban society.

The large number of persons of diversified types inhabiting cities has brought about a substitution of group treatment for individual treatment in both social and economic relationships. In rural communities, the gregarious instincts of man are manifested in social groupings based upon kinship or on a territorial community of interests. City dwellers, lacking kinship ties and community life, have created a multiplicity of associational groups based on common interests. Thus there are trade unions, professional societies, reform groups, lodges, service clubs, political societies. Individuals may belong to several such groups.²⁶ Furthermore, cities develop a more sharply defined social stratification based upon economic status or paralleling occupational lines. A geographical grouping of persons of similar cultural backgrounds, status, or social position creates settlements or neighborhoods into which persons of like characteristics drift, are forced, or enter by choice. This movement has been explained by a tendency for a person ". . . to be drawn into the area in which he can compete most advantageously."²⁷ It creates an urban mosaic and facilitates group treatment.

The tendency for group treatment of the urban population is exhibited in the adjustment of urban institutions to the requirements of the "average" or "typical" rather than the individual. The economic demand for goods and services is interpreted in terms of the "typical" or most frequently encountered consumer. The design of mass-produced articles is standardized and adjusted as closely as possible to the predominant tastes and needs of the group to be served. Those persons whose tastes or requirements are out of the ordinary must pay a premium for their satisfaction.

In summation, the social behavior pattern of urban areas is characterized "by a numerical preponderance of large over small circles; secondary over primary groupings; associations over communities; transitory over permanent contacts."²⁸ There is also a preponderance of the unrestrained over the restrained; the individualistic over the conformative;

²⁶ *Ibid.*, p. 273.

²⁷ *Ibid.*, p. 112.

²⁸ Spykman, Nicholas J., "A Social Philosophy of the City," in *The Urban Community*, *op. cit.*, p. 59.

the rational over the emotional; the formal and objective over the personal and the intimate; the self-assertive over the self-effacing behavior.²⁹ In city morals, there is less self-control; in city politics, there is often progressivism; in city economic behavior there is individualism in production and formalism in consumption; in city art, there is independence and individualism; and in city philosophy, moral and aesthetic values lose their absolutism and relativity reigns.³⁰

Social Characteristics and the Demand for Land

At the beginning of this section it was made clear that the social characteristics of the urban population are important determinants of the demand for the services of real estate. This fact has particular significance with respect to the demand for housing, for space for recreational and religious facilities, for retailing, and for the various service functions. On the other hand, the demand for space for the performance of the basic or primary economic activities, such as manufacturing in Detroit or government service in Washington, is based upon factors which are national or regional in scope. Thus the number and size of automobile factories reflect national requirements for cars and trucks, and the production of steel in Gary depends upon its use the country over in numberless products. But the secondary economic activities in each community, such as the provision of dwelling space or the distribution of goods at retail, directly serve its population and are profoundly influenced by the nature of that population. As suggested previously, the nature of each local population is greatly influenced by the character of the primary economic activities which sustain it.

The underlying population trends that have been discussed in this chapter will influence future land use in urban areas in various ways and degrees. First of all, the marked slowing down in city growth that we have noted will affect the aggregate demand for urban land. Since the relative demand for urban land may be expected to decrease as the rate of population growth in cities decreases, land values will probably not rise so rapidly in the future as in the past. Moreover, the slower rate of population increase will probably result in less demand for urban land to be used for public utilities; in general, the amount of urban land used by enterprises whose growth depends mainly on an increase in numbers will tend to decline.³¹ Again, the deceleration of population growth in cities will be accompanied by an aging of the population.³²

²⁹ *Ibid.*

³⁰ *Ibid.*, pp. 59-64.

³¹ National Resources Committee, *Population Statistics, Urban Data*, p. 3.

³² *Ibid.*

A community in which there is a large proportion of persons in the upper age groups will require relatively less space for schools than a city of young people with growing families and more space for institutions that cater to the needs and tastes of an aged population. The spatial distribution and nature of the homes, offices, and retail stores of an area in which there is an aging population will have to be adjusted to the needs of this group.

The declining size of the urban family will influence the design of dwellings and the space requirements for baby shops and for obstetrician's offices. Finally, as a reflection of the increasing predominance of females, relatively more land will probably be used for women's specialty shops than for men's clothing stores and relatively less land will be used for bowling alleys than for cinema houses.

Social values lie behind the demand for urban land; and though we usually consider the utility of space in terms of economic advantage, we must recognize that under some circumstances social values may "endow space with qualities quite extraneous to it" either as an economic or as a physical phenomenon.³³ Indeed, space in urban areas may become a cultural symbol and the satisfactions arising from the use of such a parcel of land as a historic monument, for example, may take the form of community pride in achievements of the past.³⁴ The land economist is interested in these social values and behavior patterns for purposes of getting at the sources of demand for urban land. But as we have indicated already, the economist is not, as an economist, primarily interested in whether it be social, cultural, or economic criteria which are crucial in the determination of the demand for a particular parcel of urban land for a particular purpose. He merely seeks to explain how urban land is allocated through the market process.

Economists are not particularly interested in the analysis of motives. They seek to explain activities and assume motives merely as a convenient starting point. In every economic act there is a balancing of motives, and what the particular motives may be is to the economist a matter of small moment. It is convenient to class all motives under a single head, utilities, and all those which dissuade from action under the head of disutilities. Nothing more detailed is needed for the purposes of economic theory.³⁵

³³ Firey, *op. cit.*, pp. 3-86.

³⁴ *Ibid.*

³⁵ Johnson, Alvin Saunders, *Rent in Modern Economic Theory: An Essay in Distribution* (New York: The Macmillan Company, 1902), pp. 10-11.

CHAPTER 4

DEMAND FOR HOUSING

We have now considered the general aspects of the demand for the services of urban land; there has been a discussion of the functional basis of the urban economy and of the factors that have created cities and which influence the extension or contraction of urban activities. There has also been a description of the people who inhabit cities and whose needs and preferences as consumers are the basis for the service activities of the community. It is now appropriate to turn to an examination of the factors that determine the demand for space for each of the major classes of urban land use—residential, retail, wholesale, office, industrial, and public.

A greater portion of the developed area of cities is devoted to residential use than to any other utilization. One study finds the proportion to range around 40 per cent of the total developed area and 80 per cent of the developed area excluding public land.¹ Another analysis determined that housing as a per cent of developed area ranged from 34.5 in large cities to 42.7 in cities with populations of from 50,000 to 100,000.² Because of its prime importance, we shall consider the demand for housing first among the various types of land utilization. The discussion will be from two standpoints, first, with respect to the *number* of dwellings, and, second, with respect to the *quality* of dwellings. In discussing housing demand, the term "dwelling unit" will be used to describe the housing space that supplies the full complement of living facilities—for cooking, eating, sleeping, and relaxation. The dwelling unit, then, is the space designed to accommodate one family group, regardless of the type of structure in which it is enclosed. The second aspect of demand, concerning the quality of housing, relates to

¹ Bartholomew, Harland, "Urban Land Uses," *Harvard City Planning Studies*, IV (Cambridge, Mass.: Harvard University Press, 1932), p. 138, Table 58.

² National Housing Agency, Urban Development Division, in Hearings before the Senate Committee on Banking and Currency, Part I (revised), facing p. 538.

the physical and economic characteristics of the dwelling unit, its size and arrangement, equipment, state of repair, neighborhood environment, type of enclosing structure, price or rent, and tenure.

It is important to recognize that the demand for housing is local, for in each urban area a local real estate market exists in which the forces of demand and supply are directly affected by conditions peculiar to that area. Thus, the factors of demand for housing are primarily a reflection of the economic and social characteristics of the community, although local demand is, of course, affected by national or regional economic fluctuations. Since local characteristics often vary widely among cities, so the nature of the demand for housing is found to vary.

THE QUANTITY OF DEMAND FOR HOUSING

Shelter is one of the necessities of life; we may assume that there exists an aggregate potential demand for a quantity of housing sufficient to accommodate the entire population. Our society is so constituted that it is customary for people to live in family groups, and for the most part each family group occupies a separate dwelling unit. There are, of course, exceptions to this practice. There are substantial numbers of unattached individuals who live alone. These persons demand a special type of housing, which will be discussed separately. Furthermore, for reasons of enforced economy, custom, preference, or shortage of supply, some dwelling units are shared by more than one family. But the number of units of demand for housing in an urban area may be considered as substantially equivalent to the number of family groups or combined families economically competent to occupy separate dwelling units. A measure of the potential quantity of demand is in effect a measure of the number of these groups. Thus the total population of a community, or changes in population, have significance only when expressed in terms of the number of families. It is true, of course, that an increase in the population of a community is concomitant with an increase in the number of families, but the two changes are not necessarily directly proportionate. For instance, when population increases by migration, it may be that a portion of the immigrants are single persons who do not normally occupy a family dwelling unit. Again, if the trend in the direction of smaller families is to continue, future populations will contain a proportionately larger number of families. In a normal market, with a small surplus of housing, since all families are housed in some manner, the quantity of demand in a community may be roughly determined by counting the number of occupied dwelling units. Of course, this would not be the case if there existed such a serious housing shortage

that families were forced to double up or to live outside the community through lack of available housing facilities.

There is an important distinction to be made between the term "demand" used in the sense of the foregoing paragraphs and "market demand." We are concerned here with the number of family groups that, in the normal course of events, would occupy a separate dwelling unit; we are not examining at this point the number of families that are ready, able, and willing to buy or rent accommodations. Basic demand or need influences but does not finally determine the salability or rentability of dwelling space. Thus, in times of depression there is no reduction in need but a marked reduction in market or effective demand. In lush times, though the quantity of demand or need may not rise, there may be a great increase in the number of families that actively enter the market to improve their housing status. In this section, we are to examine only those factors which influence basic demand; we shall deal with the matter of market activity during a later consideration of the cyclical nature of the real estate market. The qualitative aspects of housing demand are to be dealt with in the next section. At this point, we are concerned only with the aggregate demand for all types and qualities of dwelling space.

Marriages

New families created by marriages are an important source of increase in the demand for dwellings. Not all newlyweds can afford to occupy a separate home and, particularly in times of economic stress or housing shortage, often move in with in-laws until conditions improve. Among certain racial groups, this practice is common, sometimes through chronic necessity and sometimes by custom. But for the most part, newly formed families require separate quarters, and the number of marriages represents an approximately equal increase in the total of family groups requiring housing.

The marriage rate (number of marriages per population unit) is sensitive to changes in economic conditions, falling off in hard times and spurting above normal at the return of better prospects. During the recovery period following 1932, much was made of the backlog of marriages postponed during the depression.³ It was asserted that with the improvement in the economic situation, the postponed weddings would be celebrated in such great numbers as to create a serious housing shortage. It has been true that the marriage rate increased following the

³Stouffer and Spencer estimate that in 1933 there was an accumulated marriage deficit of 794,000. "Marriage and Divorce in Recent Years," *Annals*, November, 1936, p. 64, Table IV.

depression, but not sufficiently to bring about the expected shortage before the war. In the first place, postponed marriages may be spread over a number of years, and many of them are never celebrated. Again, those persons who overestimated the effect of the anticipated wave of marriages may have failed to take cognizance of the counteracting factors of death and divorce, which continued through the depression with little abatement to destroy families and reduce the demand for housing.

After the low point in the marriage rate, which was reached in 1931, 1932, and 1933, the rate resumed its normal level except for a small spurt in 1937. Beginning in 1940, the first evidences of wartime influences were felt. The rate rose as a result of prosperous conditions and a desire to avoid military service under the draft. War marriages pushed up the rate to a new high point in 1941 and a still higher peak in 1942. The rate declined while so many men were overseas but rose again at the end of the war. A readjustment to more normal levels is already under way.

Death and Divorce

It has just been suggested that in interpreting marriage data in terms of housing requirements, the total of marriages should not be counted as net gain, for while marriages are creating new families, other family groups are being dissolved by death and divorce or separation.⁴ It is not true that each divorce reduces the units of housing demand, for in cases where there are children, and in some cases where there are no children, the home may be continued in operation or two homes may be required where one had been sufficient. Again, divorce may be followed by the remarriage of one or both of the divorcees. But in a large proportion of instances, the home is broken up and the divorced individuals are housed with relatives or in rooms rather than in dwelling units.

The death of one of a married couple may give rise to a reduction in the quantity of demand for housing. In many cases, the survivor moves in with relatives or takes up an existence in rented rooms. In other cases, the home is continued until the death of the survivor.

The divorce rate, like the marriage rate, is responsive to changes in economic conditions.⁵ Divorce declines during times of economic stress because of an enforced sobriety of living, greater burden of the cost of freedom, and difficulties for the ex-wife in earning a separate living.⁶

* Divorce data must be interpreted in light of the fact that in many cases divorce is preceded by a period of separation. Because of religious or other reasons, many separations never culminate in divorce.

⁵ Stouffer and Spencer estimate that in 1935 the accumulated divorce deficit was 171,000. *Annals*, *loc. cit.*

⁶ Cohen, Alfred, *Statistical Analysis of American Divorce* (New York: Columbia University Press, 1932), p. 132.

The declines in divorce are smaller in amplitude and shorter in duration than in the case of marriages.⁷ Since death is more than four times as important as divorce in dissolving families, the aggregate rate at which homes are broken up does not decline substantially during periods of economic stress. The basic trend in the divorce rate is upward. The rapid increase in divorces in the early postwar years is in part a reflection of disturbed conditions, hasty war marriages, and war-created personal maladjustment.

It is the opinion of one analyst that in periods of prosperity the marriage rate exceeds the rate of family dissolution by death and divorce and that in periods of depression, families are dissolved at a faster rate than that at which they are being created.⁸ From census data and marriage estimates, it can be calculated that between 1930 and 1940 in urban areas there were more than 7 million families dissolved by death or divorce as compared with about 10 million marriages.⁹

Migration

It has been pointed out in a previous section that immigration has been the prime factor in the growth of most cities. There are no data to indicate the proportion of migrants who come alone as compared with those who come in family groups. There is reason to believe that this proportion varies among cities as a reflection of the type of employment available. For instance, the growing automobile industry in Detroit was particularly attractive to single young men. On the other hand, a substantial proportion of the migrants to the California cities have been married couples of retirement age, although this proportion has been reduced in recent years. It is apparent that the movements of families in and out of the urban areas have a direct effect on the quantitative demand for dwelling units, while the migration of unmarried individuals has an immediate effect only on the demand for rooms, with a delayed influence on housing demand.

The volume of migration responds to economic opportunity in most cities. When jobs are to be had, there is a flow from country and village to the cities somewhat in proportion to the number of available jobs. In hard times this flow is reduced and sometimes reversed. Detroit,¹⁰

⁷ *Ibid.*, p. 136.

⁸ *Real Estate Analyst* (St. Louis: Real Estate Analyst, Inc., October, 1937), p. 805.

⁹ The families dissolved cannot be calculated exactly, since it is not known how many married men who lived in urban areas in 1940 had migrated from nonurban areas after 1930.

¹⁰ Ratcliff, Richard U., "The Detroit Housing Market," *Michigan Business Reports*, no. 4 (Ann Arbor: Bureau of Business Research, University of Michigan, 1939), p. 14.

Chicago,¹¹ and other cities declined in population during the years 1931, 1932, and 1933, and for the country as a whole there was a net migration from cities to farms in 1932.¹² During the last half of the thirties and during the war period, the trend was reversed and a very large net cityward movement developed. Though there has been a slackening, over the long run we may expect this cityward movement to continue.

Sharing of Dwellings

The sharing of dwellings by two or more families, commonly known as "doubling up," is particularly characteristic of hard times and periods of extreme housing shortage. As unemployment increases and earnings decline, families without income move in with relatives who are better off, or two or more families suffering reduced earnings share quarters hired out of the combined resources.¹³ It is apparent that when one family moves in with another, there is a corresponding reduction in the quantity of demand for dwelling units, and that, conversely, when undoubling occurs, the quantity of demand is increased.

It was revealed that in a group of 203 cities covered by real property surveys in 1934, 1935, and 1936, some 439,000 families, or 5.5 per cent of all families, were classified as "extra families," i.e., families who would require separate dwellings under improved economic conditions and improved earnings.¹⁴ The 1940 Housing Census showed 1.3 million families or 4.6 per cent of all nonfarm families as having one or more extra or subfamilies. Facts of this kind have been used in the estimating of potential demand for housing. It must be recognized, however, that, regardless of economic conditions, there is always some chronic doubling up. Many families never are able to afford separate dwellings and never expect to attain that state. Among certain racial groups, the sharing of dwellings by related families is the accepted practice, and in many cases that manner of living suits the preferences of the families or effects

¹¹ Hoyt, Homer, *One Hundred Years of Land Values in Chicago* (Chicago: University of Chicago Press, 1933), p. 483.

¹² U.S. Department of Agriculture, *Agricultural Statistics, 1938* (Washington, D.C.: U.S. Department of Agriculture, 1938), p. 435.

¹³ In a study of 148 cases of shared dwellings in Martinsburg, W.Va., a son or son-in-law relationship existed in 65 per cent of the cases, while only 5 per cent of the families living together were totally unrelated. Lawrence N. Bloomberg, *Journal of Land and Public Utility Economics*, vol. XII, no. 1, p. 81, February, 1936.

¹⁴ Works Progress Administration, *Urban Housing* (Washington, D.C.: U.S. Government Printing Office, 1938), p. 32, Table 1. Terborgh estimated in 1937 that there were from 300,000 to 600,000 such families. George Terborgh, "The Present Situation of Inadequate Housing," *American Economic Review*, vol. XXVII, no. 1, Supplement, p. 171, March, 1937.

economies that permit expenditures for items that are preferred to the luxury of family privacy.¹⁵

The postwar housing shortage has led to a high level in the proportion of families that are sharing dwelling units. It was estimated that at the end of 1945 there were 1.2 million families doubled up with other families.¹⁶ Although facts are not available, the increasing pressure of demand and the lag in construction are sure to have led to substantially increased doubling after this date. For example, in Madison, Wis., in April, 1946, there were 1,700 subfamilies in a community of 24,000 dwelling units or a ratio of over 7 subfamilies per 100 dwelling units.¹⁷ In 1947, the Bureau of the Census estimated that about 2.4 million families were living with other primary families.¹⁸

Population and Demand

In the long run, population increases or decreases create increases or decreases in the quantity of demand for housing, but the changes are not necessarily proportionate. It has already been pointed out that in a situation of declining family size, the rate of increase in the number of families may be greater than the rate of increase in the number of persons. Furthermore, population change through immigration or emigration directly affects demand in accordance with the proportions of married and unmarried migrants. Population growth by natural increase—*i.e.*, the excess of births over deaths—does not mean an immediate increase in housing need. The effect of births on housing requirements is not felt for some twenty to twenty-five years after the events, when the newcomers have attained marriageable age and begin to establish new family groups. This fact points to the importance of the age distribution of the population as a forecaster of future housing needs, for the number of persons who are to attain marriageable age during a given period will constitute an important part of the new demand for housing. For the nation as a whole, a peak in the number of births occurred during the period from 1920 to 1925, and another peak has built up following the Second World

¹⁵ Bloomberg (*op. cit.*) reports that among the "extra families" covered by his study, only 55 per cent of those economically able to undouble desired quarters of their own. Among all the families doubled for more than 2 years, only 42 per cent wanted separate establishments.

¹⁶ Veterans' Emergency Housing Program, Hearings on H.R. 4761, National Housing Agency, March, 1946.

¹⁷ *Survey of Housing of World War II Veterans and Dwelling Unit Vacancy and Occupancy in the Madison Area, Wisconsin*, Bureau of the Census, HVet-no. 8, July 23, 1946.

¹⁸ Based on a nation-wide sample survey in April, 1947. U.S. Bureau of the Census, *Current Population Reports*, Series P-20, no. 11, Feb. 11, 1948.

War. This fact signifies that a peak housing demand arising from the creation of new families will occur during the years from 1940 to 1950, and another high level will be reached about 1965 to 1975. Of course, local situations will vary, and an analysis of the age distribution within each housing market must be the basis for local forecasts.¹⁹

Elasticity of Demand

The demand for housing is relatively inelastic, using the term in the strict sense of the responsiveness in the number of dwelling units demanded to changes in price. Thus, a general reduction in house prices and rents would effect only a minor increase in the total number of occupied dwelling units. This lack of sensitivity results from the fact that all but a relatively few families occupy separate units, and none except the wealthy can use more than one unit. For most families the proportion of income spent for equipping, maintaining, and financing a single dwelling is so great that a second dwelling could not be supported except at an absurdly low rent or price. However, lower housing costs permit some families to undouble and tend to encourage young couples to marry and set up homes. Again, a reduction in rents may have some small effect on immigration into the market area.

In a broad and realistic sense, the demand for housing is elastic over a wide range of housing services. The quantity of the commodity—housing—is to be measured not only in terms of the number of dwelling units but also the quality of housing services. Thus, a six-room single-family house provides a greater quantity of housing services than a three-room apartment. In this sense, housing demand is relatively sensitive to price changes; a decline in rents will bring about a considerable shifting about of tenants who find that they can now buy a better quality of accommodations than their present space for the same price. An increase in rents will bring about a movement into units of lower quality, *i.e.*, a smaller quantity of housing services. Reductions in costs of home purchase will increase the demand for single-family units as more tenants find that they can afford the satisfactions of home ownership. There will be some shifting of home owners who, at the new lower price level, can afford to exchange for a newer and more commodious structure. It is certain that the elasticity of demand among tenants is greater than that among home owners. Tenants can shift among units of various qualities with relative ease, hampered only by existing leases. On the other hand, home owners are often reluctant to abandon the dwellings and neighborhoods to which they have become attached by long familiarity even though a better house could be had at no greater financial burden.

¹⁹ The marriage peak of 1942 to 1947 is a reflection of the war influence enforced by a favorable age distribution.

In making market decisions, the consumer considers not only the purchase price or rent of the dwelling but the costs of upkeep and maintenance, as well as the cost of additional furnishings that may be required. Thus, he might not accept a large mansion even if it were offered to him at a nominal price. The responsibility and burden of caring for a large establishment are other limiting factors. Although the amount of housing that one family can or will consume is limited, the limits are very wide.

Measuring the Quantity of Demand

As a basis for short-term predictions of demand, facts reflecting the trend in the number of occupied dwelling units are sometimes useful. Changes in this total from period to period are the net product of all the factors affecting demand—immigration, emigration, marriage, death, divorce, doubling, and undoubling. Where it is not possible to make a direct count of occupied dwelling units, periodic estimates may be based on the number of new dwelling units added and a count of the vacant units. Thus, the total of new units built during a given year less units demolished gives the net change in total available units. This figure minus the increase or plus the decrease in the number of vacant units during the year yields a figure representing the net change in occupied dwelling units. The estimates for Detroit shown in Table 28 illustrate the process and suggest the value of a study of past changes as a basis for short-term predictions.

TABLE 28. ESTIMATED CHANGES IN VACANCY AND OCCUPANCY IN DETROIT, 1933-1940 *

Year	Vacancy		Net addition to dwelling units	Change in occupied dwelling units
	Number of units (end of year)	Change		
1933	21,900	-18,700	0	+18,700
1934	7,300	-14,600	-200	+14,400
1935	4,200	-3,100	1,300	+4,400
1936	2,500	-1,700	4,400	+6,100
1937	5,600	+3,100	5,900	+2,800
1938	8,900	+3,300	7,000	+3,700
1939	12,400 †	+3,500 †	7,500 †	+4,000 †

* Richard U. Ratcliff, "The Detroit Housing Market," *Michigan Business Reports*, no. 4 (Ann Arbor: Bureau of Business Research, University of Michigan, 1939), p. 42, Table 30.

† Estimated.

From time to time, there appear various estimates of national housing demand or housing need. These forecasts are either, on the one hand, predictions of effective market demand, based on surveys of the expressed intentions of a sample of consumers, or, on the other hand, statements of need based on various assumptions of acceptable minima in housing standards. By varying the assumption of the number of dwelling units that are substandard and must or will be replaced, it is possible to derive widely different estimates. An example of a painstaking attempt to predict postwar housing need is the estimate prepared by the National Housing Agency in 1944.²⁰ Table 29 summarizes the elements of the estimate. Note that nearly one-half of the "need," or 6.1 million units,

TABLE 29. ORIGIN OF NEED FOR CONSTRUCTION OF NONFARM DWELLING UNITS, 1946-1955 *

<i>Character of Need</i>	<i>Number of Units (in thousands)</i>
Increase in number of families:	
Increase in families and migration from farms	4,100
Servicemen's households to be established or reestablished	1,400
Undoubling of married couples living with another head of family	700
Total	6,200
Balance of units required to bring total number of vacancies up to 5 per cent of total supply of dwelling units in 1955	100
Total new need	6,300
Replacement of units destroyed by fire, storm, and flood	200
Replacement of substandard units demolished	6,100
Total replacement need	6,300
Grand total	12,600

* Includes a small volume of units to be provided through conversion of existing structures. *National Housing Bulletin 1*, National Housing Agency, Washington, D.C., November, 1944.

is accounted for by replacement of substandard dwellings. It is arbitrarily assumed that one-half of the units that, under the definitions employed, were substandard in 1940 are to be replaced between 1946 and 1955, plus all units to become substandard during this period. The basic demand in terms of families to be housed would be 6.2 million, representing the increase in families plus 200,000 units to care for families whose dwellings were demolished by fire or storm.

²⁰ *National Housing Bulletin 1*, National Housing Agency, Washington, D.C., November, 1944.

QUALITATIVE ASPECTS OF DEMAND

The last section has dealt with the factors that control the quantity of space subject to the effective demand of family groups. Having considered "how many," we are ready to turn to "what kind" and to examine the factors that influence the proportioning of the total demand among the demands for housing for sale or for rent and of various designs and grades. If housing were consumed with sufficient rapidity to require frequent replacement, we might find in the characteristics of existing dwellings a measure of the nature of demand. But demand changes in quality more rapidly than structures decay, and houses live on as monuments to past tastes and requirements. Between 1930 and 1940, annual demolitions were only one-tenth of 1 per cent of the housing stock. It is true that newly built dwellings reflect current fashions in housing, but these fashions are based on the effective demand of only that small proportion of the population which can afford new housing. For example, in Detroit during the year 1939, which was considered to be one of active new building, some 10,000 dwelling units were added to a total of 415,000 existing units, an increment of 2.4 per cent. In the urban areas of the United States in 1941, some 715,000 dwelling units were added to 30 million, also an increase of 2.4 per cent.

In our discussion of the qualitative aspects of demand we shall identify the factors that determine the kind of housing for which each family will bid in the market and we shall discuss how changes in these factors may influence effective demand. There are numerous attributes of housing that are subject to variation, thus forming the basis for qualitative variations in demand. In the discussion to follow, these attributes will be grouped under a number of headings. We shall first deal with the matter of tenure, considering those factors which determine whether a family shall rent or own its home. Then the discussion will concern such qualitative features of housing as type, size, style, location, and price or rent. The housing of unmarried persons will be considered separately.

Tenure

Every family seeking housing must decide whether to rent or to buy. This decision will be influenced by a number of considerations, such as custom, occupation, age, financial status, terms of financing, business conditions, market conditions, and relative costs. In considering those factors which determine the legal basis of possession, we shall use the term "tenancy" to include all the various estates less than freehold, except that the arrangement known as a "ground lease," which is encoun-

tered in our Eastern cities and which ordinarily runs for a long term, will be considered as tantamount to ownership. "Ownership" will include holdings in fee simple or under a long-term land contract or contract for deed.

Recent History of Home Ownership. Home ownership in the urban areas of the United States increased steadily from a level of 36.5 per cent in 1900 to 40.9 per cent in 1920. The next decade saw a sharp rise to 46 per cent in 1930 as a concomitant of the postwar building boom. Then the trend was reversed during the depression years and by 1940 the proportion of home ownership was 41.1 per cent.

A brief comparison of economic conditions in the twenties and the thirties will reveal the underlying causes of the reversal in the trend. In the twenties there existed a combination of circumstances that favored home purchase. It was a period of rising incomes and favorable economic outlook; family savings accumulated rapidly; credit was easy and rents and values were rising until late in the decade; a housing shortage existed in the early years and urban areas experienced strong population pressures from in-migration, new family formation, and a natural increase exceeding all past periods. The building boom that reached an apex in the middle of the decade provided a liberal supply of new single-family dwellings.

In contrast to the "roaring twenties," the decade of the thirties opened with a deep, world-wide depression; unemployment was rife and incomes fell sharply. The economic outlook was dark and not until after the middle of the period did the economy show encouraging signs of recovery; family savings were wiped out; credit was frozen and the mortality of home ownership through foreclosure was high; out-migration and doubling up created high vacancies in urban areas; building activity virtually ceased in the early years and it was not until the last years of the decade that the construction of single-family homes was resumed, and then at a rate far below the previous decade.

An interesting product of the war economy and the postwar housing shortage has been a spectacular increase in home ownership. The percentage rose from 41.1 per cent in 1940 to 47 per cent in 1944 and almost 53 per cent in 1947 as estimated by the Bureau of the Census (see Table 30).²¹

Table 31 shows intercity differences in tenure distribution and in rate of change. The trend will probably continue upward for some time. The reasons for the recent rapid spread of ownership are to be found in the generally high levels of family income and savings and in the desperate need for housing in war centers during wartime and in every

²¹ See *Federal Home Loan Bank Review*, vol. 12, no. 9, June, 1946.

TABLE 30. PERCENTAGE OF OWNER OCCUPANCY IN OCCUPIED NONFARM DWELLINGS *

<i>Year</i>	<i>Percentage of Owner Occupancy</i>
1890	36.9
1900	36.5
1910	38.4
1920	40.9
1930	46.0
1940	41.1
1945	50.8
1947	52.7

* 1940 Census of Housing, vol. II, p. 3, Table III. For 1945, *Federal Home Loan Bank Review*, vol. 12, no. 9, p. 262, June, 1946. For 1947, Special Census Release, Series P-70, no. 1, Housing Characteristics of the U.S., April, 1947.

TABLE 31. PERCENTAGE OF HOME OWNERSHIP IN OCCUPIED DWELLINGS IN SELECTED CITIES, 1940-1947 *

<i>City</i>	<i>1940</i>	<i>1944- 1945†</i>	<i>1947 ‡</i>
Birmingham, Ala.....	28.9	35.9	48.1
Hot Springs, Ark.....	29.9	40.5	§
San Francisco, Calif.....	29.5	37.5	47.3
Bridgeport, Conn.....	26.6	33.9	§
Jacksonville, Fla.....	29.8	37.2	§
Savannah, Ga.....	18.1	23.8	§
Indianapolis, Ind.....	35.0	45.7	§
Kansas City, Kan.....	48.1	63.3	§
New Orleans, La.....	23.0	26.1	32.5
Portland, Maine.....	26.8	29.1	§
Boston, Mass.....	26.5	24.9	41.0
Muskegon, Mich.....	53.4	65.0	§
Youngstown, Ohio.....	49.3	60.9	66.6
Portland, Ore.....	45.3	55.5	60.3
Philadelphia, Pa.....	36.9	48.2	58.4
Memphis, Tenn.....	29.8	39.8	44.3
Norfolk, Va.....	27.4	42.3	38.9
Spokane, Wash.....	51.1	67.3	§
Milwaukee, Wis.....	31.2	36.1	§
Washington, D.C.....	28.1	35.5	38.5

* Data for 1940 and 1944-1945, Bureau of Labor Statistics, release of April, 1946, Serial no. R. 1840. Data for 1947, U.S. Bureau of the Census, *Current Population Reports*, Series P-71, no. 35, Table I, Aug. 24, 1947.

† Surveys in the various cities were made at various dates between September, 1944, and late 1945.

‡ The data presented for 1947 are for the metropolitan district. Since there is relatively more home ownership in the areas surrounding our cities than in the cities themselves, the higher percentage in 1947 than in 1944-1945 partially reflects this condition.

§ Data not available.

community in the postwar period. Some of the increase in home ownership occurred under unusual market conditions, *i.e.*, in a period when new residential construction was at a low level because of wartime restrictions and when the home seekers were forced into acquiring existing homes. Thus the stock of rental units, especially single-family houses, recently has been reduced at a higher than normal rate to provide owned homes. A greater than usual number of existing homes formerly rented were offered for sale by their owners in some cases because of the pressure of increasing operating costs pushing against Office of Price Administration rent ceilings but in most cases because of the chance for a very large profit in selling at the extremely inflated price level of the market.

In the early postwar period, the desperation of home seekers forced many families into home ownership when tenancy was preferred and would have been more appropriate in light of the uncertain future of these families. Substantial family savings and high incomes made home purchase financially feasible for families whose inability to find rental quarters forced them to consider purchase. For the returning veterans, home purchase was made easy under loan arrangements through the Veterans' Administration, whereby no down payment was required in some cases and terms of repayment were generally liberal. There is little question that in many instances home ownership was forced upon families that were not yet prepared for the fixed financial burdens of home owning. With the first adverse turn in employment, many of these families will revert to tenancy. Furthermore, many a home purchased at a greatly inflated price will be abandoned when there have been downward readjustments in price and rent levels, when new construction has restored a more normal demand-supply relationship, and when there is a reasonable choice in rental units and in homes to purchase.

This summary of the history of home ownership has brought out some of the cyclical and market factors that condition tenure. It is apparent that the swings of the business cycle influence families in their consideration of home ownership. When economic prospects are bright, incomes are improving, and down payments can be accumulated, tenants are encouraged to undertake the obligations of ownership. The downswing of the cycle, with the future uncertain, incomes falling, and the unhappy picture of a rising foreclosure rate, induces a psychology of doubt and conservatism that is conducive to continued tenancy.

Conditions within local real estate markets fluctuate between sets of circumstances that are favorable for tenancy and those which are favorable for home ownership. In times of housing shortage, when rents have been pushed upward out of balance with building costs and when the

restricted supply of dwelling units offered for rent affords little selection, the urge for home ownership is reinforced. Because rents are more sensitive than other real estate prices, in a free market it is likely that increases in the asking prices of both new and existing houses will lag behind rents for a time. On the upswing, however, new building eventually will relieve the shortage, or construction costs and real estate prices will rise sufficiently to remove the advantage of ownership over tenancy. Should a surplus of housing be created, renting may become more advantageous than owning, at least until lagging sales prices fall into balance with rents. Tenancy is encouraged when building costs rise disproportionately. A surplus of rental units in apartments and flats, *i.e.*, units that are not salable for home ownership, prolongs the condition of surplus with its depressed rent level, and this extends the advantage in favor of tenancy, since such units cannot be removed from the rental market by sale.

Basic Forces Affecting Tenure. There are underlying forces on the demand and supply sides of the market that condition the extent of home ownership and are functions of the passage of time or reflect underlying trends. On the demand side we find that families who enter into home ownership are characteristically families with children and that they are families who are established in the community with prospects of continuing employment. But those families which constitute additions to the total housing demand are not usually of this type at the time when they first enter the local market. The immigrants into the community do not become secure immediately, and some time usually passes before they are ripe for home ownership. Newly formed families of young people are often impecunious and uncertain of their future and do not immediately feel the need for a home in which to raise a family. Thus both new arrivals in the area and young couples incline to seek rental quarters.

Financial distress and foreclosure of mortgages are destructive of home ownership. While we are inclined to associate foreclosures with periods of depression, even in good times there are large numbers of owner families who find home ownership financially burdensome and who become tenants either through foreclosure or by the sale of their properties when the financial responsibilities can no longer be met. The causes are varied and not necessarily typical of the bottom of the real estate cycle. The provider may suffer a reduction or loss in income through a shift in occupation, unemployment, disability, ill-health, or advancing age. The family may lose extra income that has been derived from a secondary worker or from taking in roomers. Furthermore, many fami-

lies overbuy and eventually discover that they cannot meet the costs, which, in an excess of optimism, had been too greatly discounted.

Many people overlook one of the most lethal destroyers of home ownership—family dissolution. In nonfarm areas between 1930 and 1940 there were approximately 10 million marriages, but the number of married males in 1940 was only 3.4 million more than in 1930.²² Thus, at least 6.6 million families were dissolved during that period by divorce or by the death of husband or wife. It may be assumed that about half of the families that suffered dissolution each year, or 330,000, were owner occupants. This assumption is supported by the fact that the proportion of home ownership is greater among older families and that the percentage of owner occupancy among all families averaged more than 40 per cent during the decade. The change in occupancy that sooner or later follows all family dissolution most frequently results in a shift of the unit from owner occupancy to tenancy. The older a house becomes, the less attractive it is to prospective home purchasers. The aging of families and the aging of properties combine to influence the shift to tenant occupancy. The most frequent purchasers of new single-family houses are young families with one or more children, where the parents are from twenty-five to thirty-five years of age. As the years go by the children grow up and leave home. The aging parents find the home too large for their needs, or reduced income may make it burdensome to maintain. If they do not sell or rent their home they may remain until death separates the old couple, and the homestead finally changes ownership through sale or inheritance.

Concomitant with the progress of the family through the normal cycle from creation to dissolution is the change in the neighborhood from one of new houses occupied by young families to old houses occupied by a few survivors of the original inhabitants intermingled with successor families of mixed character, rooming houses, and even nonresidential uses. The upkeep of the houses is likely to have been neglected and the structures become obsolete in architecture, layout, and equipment. Thus neither the structures nor the neighborhood is any longer attractive to the younger families who constitute the bulk of prospective home owners. As the properties become older and less tenaciously held in the face of economic adversities, there is a rise in the incidence of foreclosure and loss of ownership through tax delinquency.

Turning now to the supply side of the picture, we find that rental accommodations are provided not only by units that have shifted out

²² Total marriages in the United States as reported in Bureau of the Census release Series PM-1, no. 1, July 4, 1944. Adjusted to reflect nonfarm population only.

of the owner-occupant status but also by the addition of rentable units to the housing stock. These additions are provided both by new construction and the conversion or subdivision of existing structures. There is no measure available of the number or proportion of single-family houses that are built for rent. It is generally assumed that the majority of such houses are built by their owners for their own use or are built for sale by operative builders. Of course, a number of single-family houses, particularly in Southern communities or in single-industry towns, are constructed with the intention of rental. Furthermore, operative builders are often forced to rent houses when buyers cannot be found. The census reports show that in 1940 there were 3,360,000 single-family structures reported as having been built between 1929 and 1940. Of this number 970,000, or about 29 per cent, were tenant-occupied in 1940.²³ There is no evidence to indicate how many houses were intended for rent or were never owner-occupied and how many of them suffered a change in occupancy status.

The number of additional dwelling units produced through the conversion of existing structures is an elusive item because building permit records are not complete or dependable. An estimate has been made that, from 1929 to 1940, about 725,000 units were added by conversion. Since this number includes only the additional units and thus is substantially less than the total number of dwelling units contained in converted structures, it seems safe to assume that at least 725,000 rental units were supplied by conversion and that the number of owner-occupied units in converted structures is no greater than the difference between the total units contained in the converted structures and the units added by conversion. In addition to new units created by physical change, it is estimated that some 345,000 rental accommodations were provided and occupied by the renting of light-housekeeping rooms to tenant families.²⁴

We now turn to a set of factors that condition the decision of the individual family as it faces the inevitable question of whether to buy or rent. The factors to be considered are custom, occupation, age, financial status, and relative costs.

CUSTOM. The tradition of home ownership is strong in America. It is a heritage of pioneer days and has fed upon the land hunger of peasant immigrants from Europe. It has been fostered by nationalists who believe it to be socially and politically stabilizing, by sociologists

²³ U.S. Census, 1940, *Housing*, vol. III, part I, Table A-4.

²⁴ U.S. Department of Labor, Bureau of Labor Statistics, *Housing and the Increase in Population*, Serial No. R1421 (Washington, D.C.: U.S. Government Printing Office, 1942), p. 12, Table 2.

who fear social disintegration through the decline of family life, and by those real estate interests whose livelihood comes through the building or brokering of homes. The social prestige of home ownership harks back to the time when the possession of real property was the prime evidence of wealth, and, though the effect is diminished in modern society, the home, with the automobile, remains the finest subject for conspicuous consumption.

In a recent analysis of the national housing market covering a large sample, some 70 per cent of the families interviewed said that it was better for them to own their home. However, only 34 per cent were interested in buying or building a home.²⁵ Another similar survey revealed that 47 per cent of the families now renting were planning to build or purchase a house to live in.²⁶ The same survey reported that only 15 per cent of all home owners felt that in the long run the cost of owning a home was greater for them than the cost of renting would be.²⁷ A survey of veterans in 1946 showed 4 million who were seeking new quarters; of this number, 2.8 million wished to build or buy a home and 1.2 million preferred to rent.²⁸

The social anonymity of large cities dilutes the strength of the tradition of home ownership, for the lack of communal ties and close personal relationships vitiates the prestige that, in smaller towns, attaches to landed proprietorship. Other factors, too, have caused home ownership to be less widespread in the larger communities, such as the economic and social instability that flows from the nature of urban occupations and the urban way of life.

The geographical spread of large cities, the congestion in transportation facilities, and the consequent time-distances from desirable single-family areas to places of occupation tend to decrease the attraction of owner occupancy. Even as the stigma of a mortgage on one's home has

²⁵ "Forum Study of the Housing Market," Supplement to the *Architectural Forum*, September, 1945.

²⁶ Urban Housing Survey, Curtis Publishing Company, June, 1945.

²⁷ According to an earlier study, four out of five of middle- and lower middle-class families prefer to own rather than to rent. The most frequently encountered reasons were "independence," "good investment," and "like to fix up to suit self." "The Urge to Own," *Architectural Forum*, November, 1937, p. 370.

See also Wehrwein and Woodbury, "Home Ownership vs. Tenancy," *Annals*, March, 1930.

For arguments against home ownership, see Stuart Chase, "The Case against Home Ownership," *Survey Graphic*, May, 1938.

For a full consideration of home ownership, see John P. Dean, *Home Ownership* (New York: Harper & Brothers, 1945).

²⁸ U.S. Bureau of the Census release, Sept. 19, 1946.

vanished, so in the larger cities the tenant may now attain social equality with the home owner. Social values are shifting and the extent to which family life centers in the home has declined with the virtual disappearance of large families and in the face of the competition of movie house and tavern.

OCCUPATION. Home ownership occurs with less frequency among households where the breadwinner is employed in a chronically unstable occupation than where the employment is continuous and secure. Differences in the levels of earnings among occupations also account in part for variations in the incidence of home ownership. Certain occupations are notoriously insecure or are subject to decline as natural resources are exhausted or by reason of technological unemployment; persons engaged in such activities are not wise in undertaking the long-continuing financial obligations involved in home purchase in the face of recurrent or probable unemployment or frequent moves to other cities in search of work.

A study of the occupations of a group of 789 home purchasers in Buffalo, N.Y., revealed that at the time of acquisition of the property, about three-quarters of the breadwinners were skilled workers, clerical workers, or proprietors.²⁹

AGE AND FAMILY STATUS. Neither newlyweds nor middle-aged couples are among the most likely to shift from tenancy to ownership. The most potent urge for the acquisition of a home comes to a family when the children are growing up. This period arrives between the ages of 25 and 45 for most parents. Before the age of 25 or 30, young couples are likely to prefer tenancy because of its freedom or to require it because of instability of occupation. Furthermore, neither assets nor earnings may be sufficient to permit home purchase. Middle-aged couples of 45 to 50, with their children grown, and in many cases having become habitual tenants, often consider the prospective burdens of ownership to outweigh its apparent advantages.

In the Buffalo study of the age of home owners, it was found that in about two-thirds of the cases the breadwinner was between 28 and 42 years of age at the time when the home was acquired.³⁰

FINANCIAL STATUS. Both family income and accumulated savings are factors in determining the probability of home ownership. Ownership is not frequently found where family income is not sufficiently high or

²⁹ *President's Conference on Home Building and Home Ownership*, vol. IV, p. 90.

³⁰ *Ibid.*, p. 89. The Family Economics Bureau of the Northwestern National Life Insurance Company reports that a study among 20,000 policyholders reveals that the average American couple buys their first home when the husband is 32 and the wife 29, and after they have been married for 5 years.

stable to successfully meet the purchase payments without undue sacrifice at other points in the budget.³¹ Nor can ownership be attained without sufficient assets to meet at least a modest down payment of 5 to 10 per cent of the price, which is the minimum in most cases. Thus increasing income encourages home ownership, while a decline of sufficient severity may cause an involuntary change in status from ownership to tenancy if the purchase payments cannot be met and foreclosure ensues.

A knowledge of the income range in which home buyers are most frequently found at the time of purchase is of value in understanding the relationship between income level and tenure. Table 32 presents

TABLE 32. BORROWER'S ANNUAL INCOME: NEW AND EXISTING SINGLE-FAMILY HOME MORTGAGES INSURED BY FHA, 1936-1940 AND 1946 *

Borrower's annual income †	Percentage distribution of new homes						Percentage distribution of existing homes					
	1936	1937	1938	1939	1940	1946	1936	1937	1938	1939	1940	1946
Less than \$1,000	0.5	0.2	0.2	0.1	0.2		0.7	0.3	0.8	0.3	0.2	
\$1,000-1,499	4.9	3.6	3.3	3.9	4.9	0.2	7.6	5.5	4.3	5.1	5.0	0.3
1,500-1,999	15.0	16.0	17.3	20.7	23.4	2.7	20.2	19.5	17.9	19.8	20.5	4.2
2,000-2,499	21.8	23.9	25.8	27.6	28.3	16.0	23.8	25.6	25.0	24.8	25.0	19.4
2,500-2,999	12.5	14.5	16.2	16.3	15.4	15.8	11.5	12.6	13.2	14.0	13.9	14.3
3,000-3,499	13.4	14.1	14.0	13.1	11.9	19.7	11.1	11.8	12.4	12.1	11.6	19.3
3,500-3,999	8.0	8.7	8.1	6.8	6.2	17.6	6.9	7.6	7.5	6.9	6.9	14.5
4,000-4,999	9.3	8.8	7.3	6.0	5.2	16.3	7.4	7.3	7.7	7.3	7.1	13.8
5,000-5,999	8.0	6.2	5.0	3.7	3.1	8.4	6.2	5.8	6.8	5.7	5.8	8.7
7,000-9,999	4.3	2.5	1.8	1.2	0.9	2.4	2.7	2.5	2.8	2.4	2.5	3.5
\$10,000 or more	2.3	1.5	1.0	0.6	0.5	0.9	1.9	1.5	2.1	1.6	1.5	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average income	\$3,387	\$3,133	\$2,968	\$2,781	\$2,665	\$3,619	\$3,054	\$3,014	\$3,210	\$3,029	\$3,012	\$3,640
Median income	2,814	2,716	2,603	2,457	2,381	3,313	2,452	2,485	2,599	2,501	2,485	3,101

* FHA Annual Reports.

† Includes family income of owner-occupant purchasers only; excludes operative builders, absentee landlords, and others

the income distribution of borrowers on Federal Housing Administration insured mortgages from 1936 to 1940. All these borrowers were financing the purchase of a home; more than three-quarters of them purchased a newly built house. The greatest concentration of cases is between \$1,500 and \$3,500, a range containing about three-quarters of

³¹ Purchase payments on a house of a quality that is socially acceptable to families of the same economic status. In a study of attitudes toward home ownership, the most frequently encountered reasons in favor of tenancy were found to be a dislike of the financial responsibility of owning and an inability to afford the kind of house desired. "The Urge to Own," *Architectural Forum*, November, 1937, p. 370.

all borrowers. From 1 to 2 per cent of the mortgagors had incomes of less than \$1,000. Of course, the careful selection of FHA loans excludes borrowers of uncertain income and properties of questionable quality. There was undoubtedly considerable home ownership among families with incomes below \$1,000 during the prewar decade, but much of it was unsound and insecure. In the Buffalo study of home owners, it was revealed that three-fourths of the owners had incomes between \$1,250 to \$2,750 at the time of purchase.³² Only 11 per cent were below \$1,250 and only 3 per cent below \$750.³³

It appears that for urban areas in the country as a whole, an income of \$1,000 prior to the Second World War was near to the lower limits for home ownership; for large families, the lower limit probably was somewhat higher. The local and regional variations in this lower limit reflect differences in the costs of construction and in the level of other living costs.³⁴ But in most of the country the majority of families with incomes of less than \$1,000 per year were of doubtful capacity for home ownership because of uncertainty of income and enforced mobility. Another limiting factor to home ownership among the lower income groups is the inability to secure a suitable dwelling at a price consistent with their financial ability. In recent prewar years considerable progress was made toward the provision of new houses in the \$2,000 to \$3,000 range, even in the Northern areas. The poorest and cheapest of used houses are not often salable for owner occupancy.

RELATIVE COSTS. The old question of whether it is cheaper to own or to rent inevitably enters into family discussion on the advisability of home purchase. The futility of piling up rent receipts is a favorite argument of the real estate salesman. The facts are that in the majority of cases the home purchaser actually increases his housing costs when he changes status from renter to owner. This increase is explained by the fact that the new home owner usually raises his standard of living by moving into a better dwelling. He demands better facilities in his own home than he was willing to accept in rented quarters.

³² *President's Conference on Home Building and Home Ownership*, vol. IV, p. 93, Table XIV.

³³ The proportion of home ownership has been found to increase with income in cities of all sizes. There is a definite tendency for ownership to increase in all income groups as cities decrease in size. "The American Way of Living," *Business Week*, Apr. 9, 1938.

The Urban Housing Survey of the Curtis Publishing Company, in 1945, reported that, in the income group under \$1,500, 21.6 per cent of the families interviewed were prospective home owners.

³⁴ On the basis of FHA experience, persons with incomes of \$1,000 to \$1,500 are found to occupy homes that average \$3,504 in value for new homes and \$3,139 for existing houses. See *Seventh Annual Report of the FHA*, p. 84, Table 47, 1941.

Any valid comparison of the costs of ownership and tenancy must be based on identical units and must assume that both the rent and the price of the house are determined in a normal market. The costs to be compared should include all operating expenses and interest on the total investment and must exclude payments on debt and financing charges. The costs are the same in each case, but may vary in certain particulars in favor of home ownership. First, the item of upkeep may be less in owned homes because of more careful treatment accorded the property by the owner than would be expected of a tenant. Furthermore, each change in tenants requires costly redecorating. Second, it is argued that the item of interest as a cost for the owner is less than for the landlord, since the investment risk is less for the owner occupant and hence a lower interest rate is chargeable. Another financial advantage is caused by present income-tax regulations, since the owner's property taxes and the interest on his mortgage debt are deductible items.

A liberalization of the terms of purchase encourages home ownership by reducing the financial strain on buyers, although it does not reduce the real cost. The number of potential home buyers is increased with each reduction in the down-payment requirement, decrease in interest rates, or extension of the term of repayment. Until recent years home ownership for most families required a greater monthly outlay than renting. The influence of the low interest rates and liberal terms of financing promulgated by the FHA now makes it possible to own a new home with contract payments that normally are no greater than the rent on a less desirable house or apartment. This equality may be more apparent than real if proper consideration is given to the inevitable costs of upkeep that the home owner must meet. FHA terms for mortgage financing on old houses are not so liberal as on new houses, but, following the lead of the Home Owners' Loan Corporation, many institutions and private holders are offering old houses for sale on land contract on terms nearly as attractive as terms available on new construction.

From the standpoint of family financial policy, home ownership, like life insurance, has the virtue of enforcing regular savings. It has the disadvantage of concentrating a large proportion of the savings of most families in a single investment, more subject to risk than if the same amount were in diversified investments. Again, by way of an advantage, the investment in a home provides an investment object that has the same use value regardless of fluctuations in its market value. Finally, the degree of risk is in part determined by the amount of the debt and the terms of the contract for its repayment; thus a large down payment

or the rapid retirement of debt reduces the fixed charges that the owner must meet and leaves his investment less vulnerable to the effect of fluctuations in his income.

Whether or not the purchase of a home in a given case is or is not a "good investment" cannot finally be determined until the investment is liquidated or shifted by sale. Not until the end of the ownership is it possible to make a full accounting. If the home were purchased when prices were depressed and sold during inflation or even in a normal market, the result would be favorable. If conditions were reversed, so would be the result. A major difficulty lies in the inability of the buyer to foresee, at the time of purchase, the conditions under which future disposal will be made. In most cases, houses are sold when personal or financial situations dictate the necessity, regardless of the state of the real estate market.

It would seem to be a wise course for families to consider home ownership not primarily as an investment transaction, but rather as a device for securing a way of life that they desire. The objective is to provide the kind of home life that they consider necessary to happiness, and the investment considerations are secondary. Each family, to be sure, must evaluate the risk involved in light of their financial status, prospects, and permanence of job and location. This risk should be balanced against the living values that an owned home will provide in comparison with rented quarters. Prospective home owners may take assurance from the fact that, in spite of the vicissitudes of home ownership in the past, the proportion of owner families has remained persistently above 36 per cent since 1890 and that the basic trend has been upward.

Other Forms of Tenure. There is some demand for housing under forms of tenure that differ from both the usual ownership and tenancy arrangements. In certain Eastern cities, notably Baltimore and Philadelphia, a common form of holding is under long-term lease, usually for 99 years renewable forever, and hence permanent in effect. In some states, such a leasehold may be converted into a fee at the option of the lessee by payment of a lump sum representing the capitalized value of the ground rent. It is probable that the ground-rent arrangement developed because it provided a safe investment for the landowner rather than because it was demanded by the householders.

Another form of tenure which is common in a number of European nations and is increasing in this country, is cooperative ownership. While there are minor variations in the provisions, the basic scheme involves corporate or group ownership of the property, such as an apartment house or a tract of land with plots for single-family units, with

the householders owning stock in the corporation and holding occupancy under a permanent lease arrangement. During the 1920's, high-class cooperative apartments were developed as real estate promotions in many cities. The individual units were sold off to families that sought permanent tenure combined with apartment-house living in central locations. Many of these cooperative apartments became financial failures during the depression of the 1930's in cities where there had been overbuilding in multifamily structures. It is interesting that in the post-war housing shortage the device has been revived. The plan is for a group of families in need of housing to purchase an apartment building, evict the tenants, and move in under a cooperative arrangement. In some cases, promoters have made large profits in purchasing a building and selling off the apartments.

Housing cooperatives for families of modest income have been successful in a limited number of cases, where they have been sponsored by union groups. Some of the government war housing projects have been disposed of by transfer to groups of families, usually tied together by union affiliation, under the Mutual Home Ownership plan developed by the Federal Public Housing Authority, which administered the construction and management phases of the war housing program. Under this variation of the cooperative device, the group is enabled to purchase the housing project without a cash investment and under very favorable terms.

It is probable that the cooperative ownership plan will spread slowly, but up to the present it has assumed no importance. Those projects which have been most successful are sponsored by groups made up of families that are socially and economically homogeneous and which are bound together in some permanent and cohesive organization such as a union, which provides a stabilizing influence.³⁵

Type and Size

The demand for dwelling units in various types of structures reflects in part the form of tenure under which the properties are to be occupied. For most of the country, home ownership is associated with free-standing single-family structures. However, in some cities, particularly in the Eastern states, separate ownership of the units of row houses or terraces is common. In some cities there is a demand for separate ownership of the two halves of two-family houses of the type that is divided ver-

³⁵ See Bureau of Labor Statistics, U.S. Department of Labor, "Organization and Management of Cooperative and Mutual Housing Associations," *Bulletin* 858 (Washington, D.C.: U.S. Government Printing Office, 1946); National Housing Agency, *Mutual Housing* (Washington, D.C.: U.S. Government Printing Office, 1946).

tically. Two-family structures, called "duplexes" in Milwaukee and "income bungalows" in Detroit, were in vogue during the 1920's. These structures, divided horizontally, were in demand by prospective owner occupants, who planned to occupy one unit and rent the other for profit. The experience of owner occupants of two-family units was not happy during the depression years. In too many cases the purchase of the property was financed with the expectation that both the owner's income and the revenue from the rented unit would be maintained. But the owner's earnings suffered and the rented half of the property was particularly vulnerable to vacancy and rent reductions. During the recovery period, there was little demand for two-family income properties, and relatively few units of this type were built.

A large proportion of tenants is found in multifamily structures—in duplexes, flats, and apartment houses. To some extent this fact reflects economic inability to command a separate house, however desirable it might be. As family income increases, so does the tendency for tenants to demand single-family units. In many cases, however, other considerations, such as convenience, lead tenants to prefer to move upward into better quality flats or apartments as income permits.

Space requirements based on family size are factors in determining the type of structure in which housing accommodations are demanded. Dwelling units in apartments are not generally desirable for families with growing children. Flats ordinarily provide more space, but one-family units are best for raising the next generation. Young married couples with an infant or two or childless couples find apartment life adequate, but, as families grow in size and children approach school age, the pressure for more space and a better environment becomes stronger. When the children are grown and gone, the parents, particularly in the tenant class, often prefer smaller units in multifamily structures.

The age and sex distribution of the family group affects the number of bedrooms that will be sought in so far as income permits. Young children under eight or ten years of age may occupy the same sleeping quarters or share a bedroom with their parents. But as they reach puberty, it becomes desirable to segregate the sexes, with a resulting expansion in space requirements. Separate sleeping quarters are desirable for each adult who is not one of a married couple and are necessary unless space can be shared with a person of the same sex.

The social stratum in which families are situated conditions their demands for housing space. Among certain classes, the prestige of home ownership forms a potent incentive, and the spaciousness of house and grounds is a measure of social standing. Where the home is used frequently for social entertainment, large living and dining rooms are in

demand and guest rooms and servants' quarters must be provided. At the other end of the scale, families with limited means must be satisfied with a minimum of space for family cooking, eating, and sleeping, with perhaps a small living room. In many cases, space within the dwelling must perform multiple functions, as, for instance, a living room used for eating, sleeping, and relaxation or a kitchen also used for eating. This way of life is most characteristic in multiple-family structures, although there is an increasing demand from middle-class families for greater flexibility of space in single-family houses in the interests of economy.

From time to time, there appear passing fads in the demand for housing, sometimes local in scope, sometimes sweeping the country. Allusion has already been made to the vogue for duplexes in Milwaukee and income bungalows in Detroit during the twenties. During the period from 1925 to 1930, there was a substantial growth in the popularity of apartment units, although one of the reasons for the increase in this type of construction was the popularity of mortgage bonds with which apartment houses were generally financed. In Chicago, a particular type of brick bungalow was built in large quantities during the last boom. In some cities, certain types of structures have continued in demand for long periods; for example, row houses have long been characteristic of Philadelphia, Baltimore, and some other Eastern cities, whereas they are out of favor in many Midwestern communities. In the period of building recovery starting in 1934 and 1935, single-family homes have been the predominant type of construction, while relatively few multi-family structures have been erected. In part, this situation has been the result of favorable terms of financing home ownership, together with the availability of improved building lots at relatively low prices.

Style

Fashions in architecture, like the length of skirts, ebb and flow with the passing years. Each era has had its own forms and ornamentation, sometimes stemming from the contemporary way of life, more often simply mirroring the current fads in décor. The same old building materials appear and reappear in varied design and combination. Changing patterns in interior plan have reflected changing social requirements and advancing technology. So well dated have been our architectural fashions that an expert can determine the age of an existing structure with considerable accuracy by a glance at the exterior design and use of materials.

Within each social and economic group in a community, there is a marked similarity in architectural preferences. With respect to the

amount and arrangement of interior space, this general agreement is based upon similarity in cultural background, in family needs and habits of living; it is influenced by the architectural traditions in the area. In recent years there has been a tendency to break away from accepted styles and to develop a modern architecture in which there are few transitional vestiges of old forms and in which function is the beginning and the end. This movement, while gaining strength, has influenced only a small proportion of new residential construction.

Location

Every family strives to find quarters in an area that meets its peculiar location specifications as nearly as possible. But financial resources are limiting factors, so that in almost all cases except of those families at the top of the economic scale, the actual place of residence does not fulfill all requirements or desires. Thus, in examining the location aspect of the demand for housing, we shall look only at the economically effective demand and examine the motives that, limited by financial capacity, shape that demand. The strength of these motives depends upon the intelligence of the family, its cultural background, and its social position.

In general, people prefer to live among their own kind; thus, families seek neighborhoods where there are persons of the same general social and economic class.³⁶ While it is true that people tend to find their own social level, it is likewise true that among many classes the homes of the social leaders radiate a magnetism that attracts other families. A social appeal is created by the presence in a neighborhood of families well up in the community hierarchy. Families of lower state are likely to push their places of residences as closely as possible to these local bluebloods.

Convenience, in terms of distance and transportation facilities (time and cost) to the other functional areas of the city, is a prime consideration. Those members of the family who are employed hope to live as convenient to their work as possible; the housewife looks to the proximity of shopping facilities; the location of churches and theaters must be considered; and if there are children, near-by schools, parks, and playgrounds are advantageous. For families who contemplate home ownership, and thus the relatively permanent occupancy of one house, congeniality in neighbors is especially important, particularly as it may

³⁶It is suggestive in this connection that there have been many cases of former slum dwellers, moved into more spacious public-housing projects, who have preferred to move back into the squalor of the slum because of the more congenial social life.

affect the playmates for children. Young couples with growing families are likely to prefer relatively new areas, often neighborhoods in the process of development, to which other young families of the same economic status are migrating and where there is plenty of open space and air. They will avoid, if possible, neighborhoods where the houses and their occupants are advanced in years. The considerations of family life will weigh more heavily than those of convenience to work or to shopping areas.

Another desirable feature of residential locations is the absence of obnoxious land uses or unwelcome social groups, together with some protection against the invasion of such uses or groups. Thus neighborhoods protected by adequate zoning regulations or deed restrictions are favored. Areas that might be subjected to special hazards such as floods are avoided if possible. The availability of the full complement of utility services is an important consideration, although modern automatic water pumps and septic tanks for sewage have diminished the disadvantages of living beyond the zone of city utilities. Locations possessing physical attractiveness are in demand. Charm or appeal is based on topographical features, the plan and layout of the neighborhood, and the architectural attractiveness of the buildings.

Price and Rent

The demand for housing varies qualitatively with respect to the amount of the bid. The upper limit to the price or rent offer of any prospective purchaser for a given dwelling unit will be controlled by the subjective valuation that he attaches to the services of this unit. This valuation, in turn, is the function of his income, of his subjective valuation of money, and of a complex of social and economic forces bearing upon the individual that determines the values he attaches to each possible item of expenditure clamoring for a place in the family budget. With a given income he must determine its distribution in accordance with the relative importance of the optional goods or services that he may buy. Within the limits of his income, he will tend to so adjust his purchases that the final increments acquired of each commodity yield an equal subjective value; that the last dollar expended for each item provides a satisfaction that is the same as derived from the last dollar of expenditure for every other item. Thus, the total expenditure for housing is determined by the value attached to the optional purchases that might be made with the last dollar spent for housing. If some item may be acquired with that dollar which is of greater utility than the additional comfort or pleasure attached to a slightly better quality of housing, the money will not be spent for shelter.

It is apparent that the allocation to housing of equal amounts by different families does not necessarily mean total budgets of equal size, nor the same pattern of expenditures for equal budgets. It is quite possible that a family with a large income will arrive at the same expenditure for housing as a family of much lower income by virtue of spreading its expenditure over a larger number of items or attaching higher values to additional quantities or qualities of other commodities than to better housing. Two families of equal income may arrive at different demand prices for the same grade of housing by virtue of a divergence in subjective evaluation of the same optional purchases.

Not only is the price offer for each grade of housing determined by comparative valuation of optional purchases, but the decision is made in light of the subjective value of money to the consumer.³⁷ Thus, a consumer with a large income may tend to be willing to make a larger money offer to secure the same grade of housing for which a poorer man will offer less. Each has so distributed his earnings that the last dollar spent for each item yields an equal satisfaction. The rich man, however, having more dollars at his disposal, is able to satisfy relatively nonessential needs. He compares the utility gained by each dollar spent for luxuries with that of the last increment of housing quality. His conclusion is likely to be that this last quality increment is worth several of the dollar luxury items. Thus, his price offer will be more liberal than that of the poorer consumer, whose choice is limited to the necessities of life.

The foregoing argument has presented the basic explanation of why the demand price for housing on the part of any individual is likely to vary with his income. Considerable evidence has been adduced in various family budget studies to the effect that within each market area families of similar income tend to expend about the same proportion of their income for housing. This rent-income or value-income ratio appears to vary with income. If our analysis of the market so far has been realistic, and if the law of single price is operative, it might be expected that each housing unit commands about the same price or rent as each other unit of the same class. Thus, in light of the constancy of the rent-income and value-income ratios for each income group, we may assume that there will be a tendency for the units of each class of housing to be occupied by families of approximately equal income.

There are a number of sources of light on the changes in the ratio between housing expenditures and family income. In general, the relationship has been expressed as the ratio between the average income of all

³⁷ See Marshall, Alfred, *Principles of Economics* (London: Macmillan and Company, Ltd., 8th ed., 1930), Book III, p. 95.

families falling within a certain income class and the average rent paid by the same group of families (or the average value of their homes). This device fails to reveal the variations in the rent-income ratio among the families in each group. Table 33 is based on the most comprehensive survey of consumer purchases that has been made up to the present time. This study covers more than 60,000 families living in

TABLE 33. PERCENTAGE OF INCOME SPENT BY AMERICAN FAMILIES FOR HOUSING AND HOUSEHOLD OPERATION, ESTIMATES FOR 1935-1936 *

Annual income	Housing and household operation	Housing †	Household operation ‡
Under \$500	47.1	28.9	18.2
\$500-750	33.4	19.9	13.5
750-1,000	30.6	18.5	12.1
1,000-1,250	29.7	18.1	11.6
1,250-1,500	27.8	16.9	10.9
1,500-1,750	26.9	16.6	10.3
1,750-2,000	26.7	16.5	10.2
2,000-2,500	25.3	15.7	9.6
2,500-3,000	24.5	14.9	9.6
3,000-4,000	23.7	14.3	9.4
4,000-5,000	22.1	13.0	9.1
5,000-10,000	19.9	11.4	8.5
10,000-15,000	17.3	10.6	6.7
15,000-20,000	15.4	8.6	6.8
\$20,000 and over	11.7	6.5	5.2
All levels	25.3	15.3	10.0

* National Resources Committee, *Consumer Expenditures in the United States* (Washington, D.C.: U.S. Government Printing Office, 1939), p. 78, Table 6A.

† Rent and rent equivalent for owned homes.

‡ Includes costs of heat, light, refrigeration, motor power, expense for household help, telephone, laundry sent out, cleaning materials, etc.

cities of different sizes, in villages, and on farms in 30 different states. The same source provides the basis for Chart 1, which pictures the effect of changes in income on the pattern of expenditures for the major budgetary items, including housing and household expense. The charted data demonstrate that the outlays for items that are basic necessities, such as food and housing, suffer smaller proportionate reductions as income declines than expenditures for items that are in the nature of luxuries.

The Financial Survey of Urban Housing of 1934 provided a mass of

data from which an analysis of the relationship between rent and income may be drawn. Table 34 presents the facts for a number of cities based on 1933 rents and incomes of tenant families.

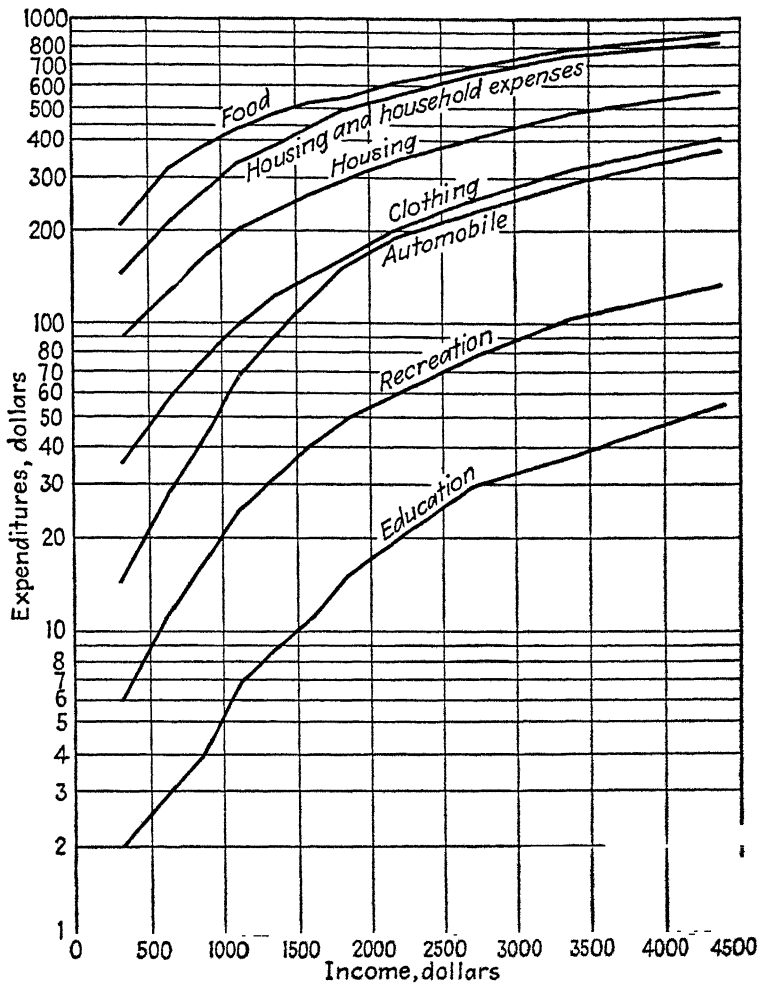


CHART 1. Relationships of income and selected budgetary items. (*National Resources Committee, Consumer Expenditures in the United States, 1939, pp. 20 and 23.*)

Tables 33 and 34 clearly reveal the general tendency for the budgetary allocation for housing expenses to become proportionately greater as the amount of income declines. These data are charted in Chart 2, using Cleveland as an example from Table 34. The nature of the data does not permit us to establish definite ratios as representative of each income

TABLE 34. PERCENTAGE OF 1933 INCOME SPENT FOR RENT CLASSIFIED BY INCOME GROUPS FOR SELECTED CITIES *

City	1933 income groups										
	All incomes	\$1- \$249	\$250- \$499	\$500- \$749	\$750- \$999	\$1,000- \$1,499	\$1,500- \$1,999	\$2,000- \$2,999	\$3,000- \$4,499	\$4,500- \$7,499	\$7,500 and over
Binghamton, N.Y. . .	22.9	120.2	54.2	43.6	31.5	22.9	21.7	18.1	16.0	12.8	
Birmingham, Ala.	18.9	49.7	28.4	22.0	18.7	16.3	15.4	13.5	12.4	11.9	8.5
Cleveland, Ohio	25.8	112.4	58.9	38.2	20.0	26.0	21.6	19.7	17.3	15.0	10.9
Dallas, Tex.	22.0	101.8	52.0	33.1	27.5	23.1	19.2	17.2	13.6	11.5	7.7
Des Moines, Iowa	23.5	97.3	48.5	35.0	27.4	23.8	20.5	18.9	15.9	12.6	
Erie, Pa. . .	26.2	126.1	57.2	38.8	28.6	23.7	19.3	17.8	14.8	10.9	11.3
Portland, Maine	24.8	136.5	62.1	43.8	33.4	27.1	22.4	18.9	14.5	10.5	6.8
Portland, Oregon	21.5	80.5	42.2	29.0	21.5	19.9	16.1	14.6	11.8	11.3	7.0
Providence, R.I.	23.9	116.4	47.1	37.3	28.1	24.0	20.3	18.4	15.8	13.5	8.4
San Diego, Calif.	22.5	96.7	53.3	36.0	28.1	22.8	18.9	16.1	14.6	12.3	6.4
St. Paul, Minn.	26.5	118.9	54.1	39.4	29.3	25.3	22.4	19.3	16.4	12.5	

* Ratio of average rent to average income for tenants in each 1933 income group. Source: J. Bion Philipson in an unpublished manuscript. Data from *Financial Survey of Urban Housing*.

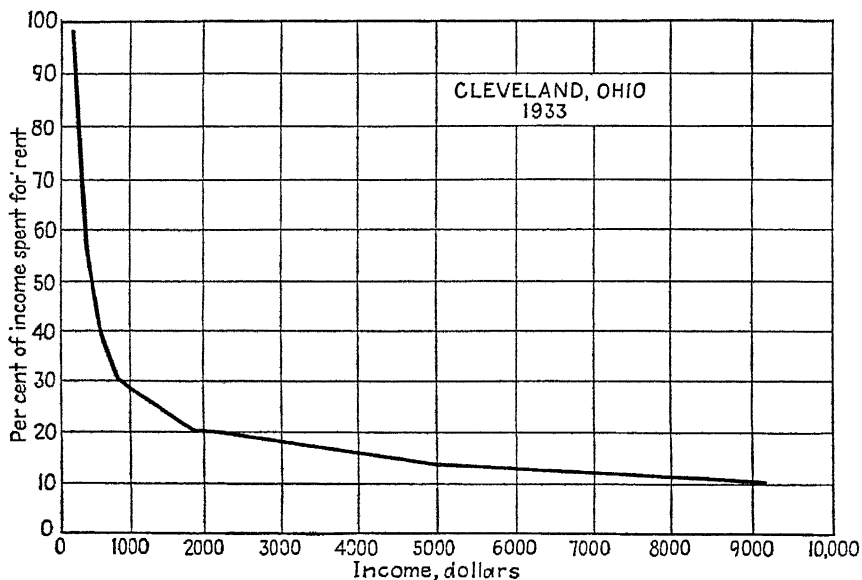


CHART 2. Rent-income relationships, Cleveland, 1933. (*Financial Survey of Urban Housing*.)

group. However, they do qualify such rules of thumb as the ancient cliché that no more than 25 per cent of income should be spent for rent.

Table 34 suggests that the rent-income relationship varies among cities. In general, the ratios are lowest among the Southern cities and highest for the Northern cities. Intercity differences are probably the reflection of differences in culture patterns and in the costs of constructing the type of dwellings required by the climate.

There is some evidence that tenant families will adjust their outlays for housing to changes in their incomes. Thus for a given group of tenants, the rent-income ratio for those families in a certain income group remains about the same, even during periods when economic conditions cause a considerable shifting of families among income groups. A study covering specific groups of tenants in a number of West Virginia cities during the years from 1929 to 1934, a period of wide fluctuations in both family incomes and rents, showed that the average percentage of income spent for rent at each income level remained substantially unaltered.⁸⁸

Further evidence of the variations in the outlays for housing of various income groups is found in the changing ratio of income and value of owned homes. In this connection, the experience of the FHA is enlightening. Table 35 presents the ratio of income to appraised value of properties on which FHA insured mortgages were placed during the year 1940. These data may not be truly representative of all urban home-owning families because of the careful selection of loans by the FHA. The ratios are useful, however, as summarizing a large sample of situations that are essentially sound.

The foregoing discussion of the place of housing in the family budget may have carried the erroneous implication that all families within a given income group proportion their expenditures in the same fashion. Such is not the case, although uniformity is approached among families of similar cultural backgrounds, family size, and age and sex distribution; and even here, there are individual variations. Within each income group, the differences in the proportion of income allotted to housing and in the evaluations of the various quality attributes are the reflections of differences in family characteristics. Many of the demand implications of these variations have been discussed in previous parts of this section. For instance, home owners spend more on housing than renters of the same income, for an owner is more willing than a tenant to sacrifice at other points in order to secure a dwelling that fits his needs and tastes and that will retain its qualities and use value over the long period of intended occupancy. On the other hand, families

⁸⁸ J. Bion Philipson, "Consumption Standards and Housing," *Annals*, vol. 190, p. 123, March, 1937.

TABLE 35. RATIO OF AVERAGE PROPERTY VALUE TO AVERAGE INCOME OF FHA BORROWERS ON SINGLE-FAMILY NEW AND EXISTING HOMES CLASSIFIED BY INCOME GROUPS, 1940 *

Borrowers' annual income †	New homes		Existing homes	
	Average property value	Ratio of property value to income	Average property value	Ratio of property value to income
Less than \$1,000	\$ 2,959	3 38	\$ 3,032	3.54
\$1,000-1,499 . .	3,504	2.68	3,139	2.44
1,500-1,999 . . .	4,263	2.44	3,701	2.13
2,000-2,499 . . .	4,931	2.22	4,333	1 95
2,500-2,999 . . .	5,416	2.01	4,894	1.82
3,000-3,499 . . .	5,907	1.88	5,399	1.72
3,500-3,999 . . .	6,403	1.74	6,153	1.67
4,000-4,999 . .	7,047	1.61	6,734	1 53
5,000-6,999 .	8,017	1.42	8,151	1.43
7,000-9,999 . .	9,476	1 19	10,144	1.26
\$10,000 or more. .	10,945	0.77	12,183	0.92
All groups	5,261	1 97	5,121	1.70

* *Seventh Annual Report of the FHA*, for the year ending Dec. 31, 1940, p. 84, Table 47.

† Includes family income of owner-occupant purchasers only; excludes operative builders, absentee landlords, and others.

with little prospect of permanence in location are less discriminating. Childless couples are inclined to value convenience and freedom from the care of property more highly than the ample space and a favorable environment that is cherished by growing families, though each type of family may pay equally for the qualities that it prefers. A study covering a number of Southern cities in which the rent-income ratio of white families was compared with that of Negro families of the same income ranges gives evidence that Negroes spent relatively less for housing than whites with equal resources.³⁹ This difference may be explained in part by the limited choice in housing that is presented to Negro families.

Testing the Quality of Demand

Real estate developers, builders, property owners and managers, and governmental officials are faced with the practical problem of testing the

³⁹ J. Bion Philipson in an unpublished manuscript.

quality of demand for housing and of detecting shifts and changes that are taking place in needs, tastes, and requirements. Where profits depend upon the successful marketing of housing space, producers, salesmen, and managers must carry on a continuing analysis of demand.

In our foregoing discussions of the various factors that determine the nature of demand for housing accommodations, we have presented the basis for market analysis. Each project or property presents its own peculiar problems. The first step is to determine in a general way which consumer group or groups are to be served by the housing space that is to be offered for sale or rent. The market may be subdivided on the basis of such social and economic characteristics as income or occupation. The location of the housing will be a further determining factor. Having identified the potential customers, the second step is to study their social and economic characteristics and to interpret these characteristics in terms of tastes and requirements with respect to housing space. The basis for this interpretation has already been presented in the previous discussion of the various factors that affect the quality of demand.

An analysis of current market activity will be helpful in testing the quality of demand. It is often possible to determine what types of property or housing space are currently the most salable and what are the characteristics of the space that is the most difficult to sell or rent. In the case of houses offered for sale, the time required to secure a purchaser is significant, while for rental properties the comparative period of vacancy may indicate the relative desirability of the unit.

One type of housing market analysis is exemplified by recent surveys of the national housing market conducted by the *Architectural Forum* and the Curtis Publishing Company.⁴⁰ Interviews were conducted with a carefully controlled sample of families and the answers compiled on such items as preference for ownership or tenancy, interest in building or buying, relationship of family size, income, and size of city to interest in buying or building a home, features desired in a home—such as types of equipment, materials, and number of rooms, style, price range, and type of financing.

Governmental agencies, Federal and local, have conducted unpublished housing market surveys in many localities as guides to planning housing projects or to aid in policy decisions of various kinds. Local housing authorities have mainly directed their research efforts to the measuring of the need for low-rent housing and to the study of areas under con-

⁴⁰ "The Forum Study of the House Market," conducted by Crossley, Inc., Supplement to the *Architectural Forum*, September, 1945.

Urban Housing Survey, Curtis Publishing Company, June, 1945.

sideration for slum clearance. Some communities have attempted to appraise long-term housing needs as a basis for an over-all housing program. During the housing emergency of the war and the early post-war period, local surveys were made to determine the number and nature of available accommodations and the characteristics of the need. The HOLC and the Federal Housing Administration prepared many local housing market analyses as a guide to policies relating to the insurance of mortgages and the management and disposition of repossessed properties. Life insurance companies and other large financial institutions often conduct local market surveys to determine the advisability of making mortgage loans or to guide mortgage investment policy.

HOUSING FOR UNATTACHED ADULTS

It has already been suggested that migration is the major factor in effecting changes in the quantity of demand for furnished rooms and that the type of employment opportunities available in each community determines the proportion and sex distribution of single persons among the migrants. During periods of expansion of mechanical industries, as in Detroit from 1910 to 1930, there will be an increased influx of young men. Expanding opportunities for clerical and stenographic work attract young women. Likewise, young women are in demand for certain industrial operations, as in textile manufacturing or food processing.

Furnished rooms are available in cheap men's hotels, apartment hotels, YMCA's, YWCA's, furnished apartments, rooming and boarding houses, and private homes. The demand for rooms in the low-grade hotels usually found near the central business districts of cities comes from persons of low income and uncertain employment, many of whom are semitransients. Rooms in the YMCA and YWCA are sought by young people of a more socially desirable class who are seeking or holding clerical jobs in the central business area. Furnished apartments are most often shared by pairs or groups of young people who hold the better class of positions. The demand for space in rooming houses and private homes varies with locations. It is generally true that convenience to place of occupation is a primary consideration in the selection of a room. Thus in the vicinity of the factory zones, the rooming houses are peopled with industrial workers, and roomers in private homes are drawn mainly from this occupational group. The rooms of office workers and sales clerks will be found in respectable districts that are convenient to the downtown area.

CHAPTER 5

DEMAND FOR NONRESIDENTIAL SPACE

This chapter deals with the forces of demand for urban land that arise in connection with commercial, industrial, recreational, and public-service activities. While more area is normally devoted to residential than to nonresidential land use, the industrial and commercial uses are of primary significance in the sense that out of them flows the economic life blood of the community and that the distributive functions of the retail uses are essential to urban life.

DEMAND FOR RETAIL SPACE

We have seen that the demand for housing is based on future returns in the form of services and amenities. On the other hand, the demand for retail space is founded on anticipated income from its use to be received in the form of business profits. The geographic pattern of retail outlets grows out of a continuous competition within the real estate market between retail stores of various types each seeking the most favorable location for its own operations. The nature of this competition and the character of the resulting distributive pattern are to be discussed in a later Chapter dealing with the urban land use structure. Our present consideration of the demand for retail space will be confined to a study of those factors which determine space requirements in terms of quantity and to a general treatment of the location specifications of some typical retail types.

Quantitative Demand for Retail Space

The portion of an urban area that is actually given over to retail uses is not an exact measure of the current need for retail space in that market. The high rate of mortality among retail stores suggests that not all the demand that is gauged by land in use is economically sound, although it is effective demand entering into the price-determining processes of the market for retail space.

Retail land use has been analyzed on the basis of area, frontage, and number of stores. In a study covering 16 self-contained cities, Bartholomew found that about 5 per cent of the privately developed areas of the cities was used for commerce.¹ On the average, there were 63.7 feet of retail frontage for each 100 persons in the population.² A similar study in the metropolitan region around Chicago covering 54 cities and villages recommended a standard ratio of 50 feet per 100 persons on the basis of the findings.³ In terms of number of stores, Bartholomew found an average of 2.29 stores per 100 persons.

There are a number of factors that influence the amount of space required by retail services and that account, at least in part, for the variations among cities in the relative extent of retail land use. Bartholomew found that the ratio of store frontage was highest in cities of 50,000 to 100,000 in population, that it was substantially lower in smaller cities, and that the ratio decreased from the high point as population increased.⁴ Size of city is in itself not a basic factor, so that we must look deeper for the possible explanations of intercity variations.

The density of population is one influence in determining the demand for retail space. Where population is concentrated, fewer stores are needed than where the pattern is more diffuse. Well-located outlets in a compact settlement will be convenient to a larger number of customers, and the retailing function can be conducted more efficiently. Another factor is the scope of the trading area of which the city is the focus. For small cities, the proximity of larger centers is a determining factor, since convenience to the larger stores and greater variety of goods available in near-by trading centers reduces the need for certain types of retail stores in the tributary town. In the study of the Chicago region it was found that the ratio of business frontage to population increased as the distance from Chicago increased.⁵

The social and economic characteristics of the population are determining factors, for the expenditure patterns of the people are conditioned by their incomes and their social values. In general, the higher the income level in a community, the greater the demand for retail services.

¹ Bartholomew, Harland, "Urban Land Uses," *Harvard City Planning Studies*, IV (Cambridge, Mass.: Harvard University Press, 1932), p. 72, Table 23. The National Housing Agency reported that commercial use as a percentage of all developed areas ranged from 2.8 per cent in small cities to 5.1 per cent for cities over 500,000 population.

² *Ibid.*, p. 76, Table 24.

³ Chicago Regional Planning Association, *The Relation of Business Frontage to Population in the Region of Chicago*, December, 1936.

⁴ Bartholomew, *op. cit.*, p. 77.

⁵ Chicago Regional Planning Association, *op. cit.*

A wider variety of goods and services are consumed, and for some items, a greater quantity is consumed, providing support for more stores. A thrifty class of people require fewer retail services than do less frugal folk. The higher the proportion of women in the population, the greater the retail space required, in part because of the female propensity for shopping and the consequent demand for variety in goods offered at retail.

There are no known measures of the importance of the factors mentioned in the foregoing paragraphs, but the direction of the forces that they represent is clear.

Two factors that bring about changes in the demand for retail space within a community are changes in population and changes in the level of family incomes as a result of local or national economic fluctuations. Demand for retail space increases as population grows, but not in direct proportion. Population declines bring a lessening demand, but the readjustment tends to lag behind. It can be demonstrated that the demand for retail space fluctuates with changes in business conditions. The effect of unemployment and reduced incomes on demand for retail space was well illustrated during the last depression by the widespread vacancies in retail areas. For instance, in 20 major outlying business centers in Chicago in 1933, some 15 per cent of the business property was vacant.⁶

It has already been suggested that there is more land in retail use than is economically justifiable. This situation is the result of the misguided optimism of individuals coupled with the relative ease with which a retail business may be started. Overexploitation in retail lines is encouraged by irrational zoning; in many areas zoning ordinances have labeled far too much frontage as potential business property.⁷ It has been erroneously assumed that all frontage on major thoroughfares would ultimately be converted to retail use. Property owners have insisted on liberal business zoning, and real estate developers have platted an excess of business lots on the outskirts of our cities because of the speculative premium in price that such lots bring.

In recent years, a more rational approach has been made by some real estate developers to the determination of the amount of space to be allocated to retail use in new subdivisions or in large-scale housing developments. The neighborhood unit is used for the basis of a series of estimates, starting with an estimate of the aggregate retail purchases of each type for all families who will ultimately inhabit the area. This

⁶ Malcolm J. Proudfoot, *The Major Outlying Business Centers of Chicago* (Chicago: University of Chicago Libraries, private ed., 1938), p. 14, Table VI.

⁷ Bartholomew, *op. cit.*, p. 71.

approximation is based on the level of incomes and the predominant patterns of expenditure as determined by the social characteristics of the families. The next step is to estimate the likely proportioning of expenditures between neighborhood stores and downtown stores, or stores in important existing subcenters. Finally, having determined the approximate volume of sales required for the profitable and efficient operation of retail outlets of the various types, it is possible to estimate the number of stores of each type that can be supported by the area when it has been fully built up.⁸

Quality of Demand for Retail Space

The qualitative aspects of a retail site are its location, size, and shape, and by far the most significant of these qualities is location. With some limitations, to be sure, the merchant can adjust his operations to fit the size and proportions of a storeroom, but he is relatively helpless to overcome the handicaps of an inappropriate location.

Location. No two locations are identical, for each site is the focus of a unique combination of social and economic forces. Thus locations differ because of variations in the pattern of geographical relationships with existing land uses and population groups. The value of a site for retail purposes lies in these relationships, for each merchant prefers that situation which is most convenient to the group of potential customers that he seeks to serve. But since there are many retail outlets seeking to serve every group of consumers, it is apparent that all stores cannot be located with equal convenience. Thus the various retailers enter into competition for preferential locations, and the ultimate retail pattern is determined by the market process of competitive bidding. This procedure is to be considered more fully in a later discussion of the real estate market.

For each type of retail store, there is a more or less definite set of location specifications that define the qualities of sites of demonstrated appropriateness. Merchants attempt to secure locations that closely conform to these specifications, for experience has shown that there is small chance of a profitable operation in a location that differs substantially from the standard. We shall not have space to consider the site specifications for all retail types, but it will be illuminating to examine

⁸This general plan was used in estimating the retail space requirements for Buckingham, a large-scale rental housing development near Washington, D.C., which contains some 1,200 dwelling units. For a more detailed outline of this approach, see Bauer and Stein, "Neighborhood Retail Centers," *Architectural Record*, vol. 75, pp. 174-187, February, 1934. See also the account of the development of a shopping center near Boston, *Architectural Forum*, June, 1947, p. 84.

the considerations that guide a number of the large national chain-store organizations in selecting locations for their units.

*Site-selection Practice among the Chains.*⁹ The steps in the site-selection process are fundamentally similar for all chain organizations. It is customary for chains to follow consistent policies with respect to the acceptability of various zones within the retail structure for their units. Some companies accept only locations in the women's shopping district of the central business area. Other groups will consider any central location or will also consider sites in outlying string streets and nucleations. Some chains locate only in the suburbs. In conformity to the established policy, therefore, the number of potentially acceptable locations is limited to the generally appropriate parts of the retail structure of the city.

The next step is to test the acceptable areas on the basis of whether or not another store of the particular type can be supported. In many cases, a district is eliminated from further consideration when it is apparent that it is already adequately served by units of the same type. Frequently this decision requires a careful analysis of potential volume as outlined in the following paragraphs.

The evaluation of a particular site is based upon an estimate of the volume of business that can be done there. A budget for the proposed store is carefully worked out, and a maximum rental is established. The final steps are the negotiation of a lease on the most favorable terms within the limits established by the estimate of volume and the budget. In some cases, several sites may be under consideration, and estimates are worked out for each. In the majority of circumstances, however, only one site is under scrutiny, since it is not often that at any one time more than one or two leases are expiring in a particular district.

The estimating of potential volume in a location, as practiced by the more progressive chain organizations, is based upon a quantitative and qualitative analysis of pedestrian traffic, often supplemented by estimates of the volume of sales of existing competitors in the vicinity of the site. The sales volume of competitors can be closely approximated, according to chain-store officials, by the method of counting the number of persons entering the store during specified periods. The estimate of volume from these data requires facts on the proportion of actual to potential customers entering the store and the average size of purchase. These facts may be determined from the actual experience of the chain making the analysis.

⁹ Adapted from R. U. Ratcliff, "The Problem of Retail Site Selection," *Michigan Business Studies*, vol. IX, no. 1.

Another method of estimating sales volume in competitors' outlets is by counting the number of clerks. In many lines, the annual volume of expected sales per clerk is a generally accepted figure and provides a basis for a dependable estimate of total annual store volume. A third method is based upon the number of feet of counter in the store.

The analysis of pedestrian traffic varies in practice from a simple count of women passing by the site at certain intervals during the day to a detailed qualitative analysis of the passers-by and the origin and destination of the component currents in the traffic stream. In some cases, this has been done by "shadowing" women shoppers from their homes, downtown, and home again.

The obvious objective of traffic analysis is to determine the number of potential customers who pass the site or who are in the vicinity and might be attracted to a store located there. Traffic counts taken at the site are of greatest value for articles subject to a large measure of impulse purchasing. For shopping goods, the count at various points in the vicinity is needed. For specialties, traffic counts have less meaning than in the other cases.

The first step in traffic analysis is to determine whom to count. Shopping outlets such as women's apparel stores have only to count adult women. Sometimes the count is of women carrying bundles. Cigar stores are interested in both men and women pedestrians, although men are by far the more important group. Men's haberdashery stores count both men and women, since almost half of their sales are to women.

Having determined which group to count, the next step is to decide at what time of day and on what days of the week the most significant counts may be made. For each type of goods, certain hours of the day mark the periods of the largest volume of sales. For women's apparel, the afternoon shopping crowds assay the highest. For articles purchased by men, such as hats, shoes, or sporting goods, the count of men at noon and after working hours is most indicative. The best practice calls for counts at frequent intervals and for short periods throughout the entire day. Greatest weight is given the counts for the most significant periods.

In each city, certain days of the week are, by local custom, the more important shopping days, particularly for women's shopping goods. The Scripps-Howard newspaper organization analyzed the buying preferences of housewives in 16 cities.¹⁰ Saturday proved to be the most generally favored day for downtown shopping, leading in preference in 13 of the cities. Of the remaining days of the week, Monday, Wednesday, and Friday were the important shopping days, with wide variations in

¹⁰ Quoted in *Advertising and Selling*, vol. 13, no. 9, p. 25, August, 1938.

importance among the cities analyzed. Counts are taken on both the important and less important shopping days, with more weight given to the results on the best days.

As an aid in the qualitative analysis of pedestrian traffic, some organizations study the traffic stream in the district by counts at various points throughout the area and at transportation termini. This procedure enables the analyst to chart the currents of traffic in the district with respect to origin and destination and to appraise more accurately the traffic passing any given site at various times of day.

Involved procedures of site analysis and estimation of potential sales volumes for prospective locations are of little avail if a suitable lease does not eventuate for one of the appropriate sites. For this reason, some chain real estate officers claim that site selection is 90 per cent negotiation. The site analysis will reveal the maximum rent that can be supported by a store in a particular location; but if the property owner cannot be induced to accept this figure or a lower one, all the scientific study is in vain. In some cases, as between two locations, that site which will produce the lower sales volume will be chosen because of a rental sufficiently lower to produce a greater net return.

All chains make some attempt to predict the future of the retail district and to foresee any shifts that may affect the traffic stream and the volume of sales at the site under consideration. In some cases, it is apparent that a district is well "anchored." The leading stores are under long leases with many years to run or own their own locations. The transportation system is permanently fixed, and no major changes in it are probable. The better residential areas show no signs of shifting.

Chains avoid districts that reveal any signs of decline. Where shifts in the retail structure are in progress and can be identified, an attempt is made to locate the unit advantageously in the path of the movement. In some cases, pioneering is done in growing outlying nucleations, and stores are installed in anticipation of a substantial development, even though it is known to be an unprofitable site at the time. Some organizations make a practice of leasing locations in growing areas well in advance of intended use. Such sites are subleased until such time as it is profitable to install a store.

There are a number of site characteristics that are regarded as detrimental to all retail outlets. For instance, proximity to undertaking establishments or to land uses that create objectionable odors or noises is avoided. Blocks that are unusually short, or where the shopping continuity is broken by banks, churches, or institutions, are not desirable. Buildings that are dark at night are not congenial neighbors for some types of outlets. Level terrain is preferred to a hillside. Some

chains prefer the shady side of the street in summer or the sunny side in winter. Undue traffic congestion may be detrimental if it interferes with the shopping function. Dilapidated or unsightly structures are avoided as well as vacant storerooms. Where the two sides of the street are on different levels, the upper side is considered the better.

As an illustration of site specifications that have been established in a general way, there follow summaries of the site-selection practice of retail chains in a number of fields. These summaries are not inclusive, nor are all retail types considered.

VARIETY. The great variety chains in America have established site specifications that are both simple and rigid. They insist on sites that are in the very center of women's shopping zones, where there is the maximum traffic count of women shoppers. In the larger cities, in subcenters that have matured to a point where a women's shopping zone exists, stores are located in the "hot spots" of such outlying nucleations. Although there are some exceptions, variety outlets are located in the popular-price shopping zone, in proximity to apparel shops, women's shoe stores, hat and hosiery shops, and department stores. The presence of competing variety outlets is not an important disadvantage in the central retail area. In fact, since women shop among the variety stores for many articles, it is often an advantage. However, in outlying locations, a careful study of the zone of patronage may be required to determine whether there is sufficient business available to support an additional variety outlet. The variety chain is reluctant to pioneer and insists on sites in retail areas that are well established and provided with the essential complement of women's shopping uses. Corner locations are considered more desirable than inside spots, but the advantage is not sufficient to warrant a substantial rental premium.

WOMEN'S DRESSES. The chains in the field of dresses are mainly in the popular-price field. They are interested only in locations in the shopping zone for popular-price lines. Sites close to department stores, women's shoe stores, hat and hosiery shops, and variety chains are specified. Locations in outlying areas are considered only when the nucleations are well matured and contain other shops dealing in apparel or variety stores.

DRUGS. The specifications for drugstore sites are perhaps more flexible than for almost any other retail use. The major consideration is convenience to large numbers of people. Consequently, sites near centers of activity that attract crowds of potential customers are in demand. In the central business district, traffic streams attractive to drugstores are found in the shopping area, in the office-building district, and in the vicinity of hotels, theaters, transportation terminals, and car and bus

stops. In the outlying shopping areas, favorable locations are found near the major intersections and among the shopping-goods outlets in the higher grade nucleations. Neighborhood locations are acceptable when at a convenient spot in a well-populated area or in the midst of an apartment-house district. Parking facilities are of some importance in neighborhood locations.

Corner locations for drugstores are not essential in districts of heavy pedestrian traffic but are highly desirable under any conditions. The advantage lies not primarily in the added window display space, but in the fact that the corners mark the point of convergence of two traffic streams, that they are frequently transfer points or stops for car and bus lines, that they are meeting points for people, and that stores on corner locations are used as havens of warmth and comfort on wintry days. The conspicuousness of corner stores is advantageous, particularly in effecting institutional advertising for chains. Finally, the long-time association between drugstores and corner locations—witness the phrase “corner drugstore”—has led the public to expect to find drug outlets on corner sites. In general, competing drug outlets are not welcomed. However, the large drug chains, bolstered by institutional advertising or pursuing a cut-rate policy, can often overcome the handicap of a near-by competitor. Districts favored with heavy pedestrian traffic can often support a number of drugstores in close proximity, but competition is avoided when possible.

RESTAURANTS. Restaurants and lunchrooms vary widely in the quality of the food and service offered and in the price level of their menus. In general, they try to locate conveniently at points where the economic group whom they serve is located at mealtimes. One large national restaurant chain serving quality food at moderate prices seeks the proximity of office buildings, theaters, hotels, railway depots, colleges, apartment areas, and shopping districts. The downtown area is spotted with eating places ranging from the drugstore lunch counter to the hotel roof garden. Some are located to serve the shopping crowds at midday; others are convenient to the office buildings. In the theater district, the higher priced restaurants are situated to glean patronage from pleasure-bound crowds. In the wholesale and light industrial area are the cheaper spots—the “hot dog” stands, the foreign cafés, the “greasy spoon” joints. Selection of restaurant sites is based on analysis of pedestrian traffic and neighboring occupancies to provide an estimate of potential customers at mealtimes and at off-peak hours. Competition in the same price range is avoided. In the financial district in New York, it has proved profitable to operate certain restaurants only at noon.

HABERDASHERY. Included in this category are outlets dealing in men's accessories, such as shirt shops and hat shops. It has been the tendency for these outlets to seek sites of predominantly male pedestrian traffic outside of women's shopping zones, and on corners. Men's shoe stores, men's clothing stores, sporting-goods stores, restaurants, and cigar stores are considered good neighbors. Frequently favorable locations are found in commercial hotel districts and office-building areas. The growing tendency for men's wear to be purchased by women has increased the importance to haberdashery stores of proximity to women's zones. One large shirt distributor reports that 50 per cent of sales are made to women. For this reason, this organization seeks locations where there is an even mixture of men and women pedestrians. Another chain in this field is reported to prefer sites in the midst of the women's shopping zone.

SHOES. Shoe stores differ in character and hence in site specifications. Women's shoe outlets require sites within the women's shopping zone and seek the proximity of apparel shops, department stores, and variety chains. Outlets dealing exclusively in men's shoes seek locations on the outskirts of the shopping zone, in the vicinity of men's furnishings stores, haberdasheries, sporting-goods shops, or in office-building areas where the male pedestrian count is high. Family shoe chains, which deal in popular-priced footwear, prefer the proximity of the shopping zone, since two-thirds of their customers are women. However, they normally seek sites at the edge of the zone, since they cannot compete successfully with the women's apparel shops for the choicer locations. Popular-price lines frequently find suitable locations in outlying nucleations that are well developed. The higher priced nationally advertised lines generally seek only central locations. In all lines, proximity to competitors is not avoided. Corner locations are desirable, but not at more than moderate rent differentials.

GROCERIES. Like the drugstore, the grocery store is appropriate in a wide variety of sites. The great food chains locate their units at sites varying from the isolated neighborhood location to the central business district spot, although there are few instances of this latter location. In the main, convenience to residential districts is the prime consideration. Since but a relatively small zone of patronage is required for the neighborhood unit, locations on major streets in residential districts are sought, provided competitors' stores are not too numerous. Locations in nucleations even in their early stages of development are appropriate. On string streets, spots near important car and bus stops or wherever well-populated residential districts are adjacent are favorable sites. For the smaller outlets, dependence is placed on potential customers within walking distance.

Recently greater emphasis has been placed on larger units and the supermarket type of outlet. The result has been to close many of the smaller stores and to seek locations on major traffic arteries that are central to a larger zone of patronage. Parking facilities are important and in many cases are provided as part of the service. Traffic congestion is avoided with the result that suburban locations are sought. In smaller towns, supermarkets can often be located centrally, though outside of the central business district, and thus draw from the entire community.

Where there exists sufficient business to support more than one grocery, the competing outlets tend to seek each other's company. Some chains adopt a policy of installing stores next to successful competing units. Corner locations are desirable but not necessary. In neighborhood locations they are sought, but in nucleations it is not ordinarily possible for groceries to compete with a number of other uses of higher rent-paying ability for corner locations.

Shape of Parcel. The dimensions of the space demanded by various retail types is in part dependent on the nature of the product offered for sale. For the majority of small retail businesses, the predominant demand is for ground-floor units of 15 to 25 feet frontage, a depth of from 40 to 125 feet, storage space in the basement, and a rear door on an alley for deliveries. The present trend is toward larger units, particularly in the apparel line. The advantages include more attractive interior display and the opportunity for carrying an increasing variety of secondary lines of merchandise. Department stores require large areas with ample display windows along the street. They prefer corner locations and usually require multistory buildings. Variety stores and furniture stores need relatively large inside floor areas and sometimes spread over more than one floor. Other types that seek storerooms larger than the standard 15 to 20 feet frontage are auto salesrooms, banks, grocery supermarkets, the larger restaurants, theaters, and gasoline stations. For shopping-goods outlets, frontage for window displays is more important than for stores dealing in convenience or specialty goods.

There are a few examples of retail types that are not always on the street level. For instance, merchant tailors and an occasional jeweler may be found on second floors in retail districts, and barbershops or shoe-repair shops sometimes locate in basement rooms.

DEMAND FOR OFFICE SPACE

Among those economic functions which are centered in urban areas, there are a number of business activities that require office space. With few exceptions, this type of space is found in and about commercial areas, in office buildings, and on upper floors above street-level retail uses.

Managerial activities of coordination and control such as those conducted by the executive branch of a corporation require office space. Offices are used as the headquarters for selling operations; in some instances as the gathering place for a crew of salesmen, as in the case of a life insurance sales agency; and again, as a sales office to which customers may come or telephone, as in those types of marketing in which customers order from samples or on the basis of specifications. Of course, many sales offices, such as those dealing in industrial equipment, provide space for the performance of both functions. A third general type of activity utilizing office space is the performance of business, professional, and personal services. This class includes the services of accountants and lawyers, doctors and fortunetellers.

The ratio of office-space requirements to population varies among cities by virtue of the differences in economic character. Small towns that are primarily trading centers require relatively little office space save for personal services and a few lawyers and real estate brokers. Communities that are predominantly industrial likewise exhibit a low office-space ratio. In such areas the managerial functions are generally performed in office facilities connected with the plants. The greatest demand for offices appears in cities that are financial centers or distribution centers. In financial centers are found the offices of investment bankers, security exchanges, security brokers, international bankers, factors, and the myriad professionals who offer business services—accountants, lawyers, engineering firms, investment analysts. Here also are corporate headquarters of large firms to whom banking connections and close contacts with other corporations are important. In cities that are centers of distribution, office space is required by sales offices, transportation companies, purchasing agents, credit agencies, and financial agencies concerned with marketing operations.

There are some cities in which the predominating activity is of a nature that requires unusual office facilities. For instance, in Hartford, Conn., are located the home offices of a number of casualty insurance companies and in Washington, D.C., the numberless agencies of the Federal government have absorbed acres of floor space in government buildings in addition to a great deal of space in private office buildings. In fact, at times, the pressure for space has forced the conversion of a number of hotels and apartment houses into office buildings. Several large mansions have been taken over for government use and a large auditorium, stage and all, has been packed with desks and files. On the other hand, resort cities like Atlantic City or Miami require relatively little office space for use in connection with their primary industry.

It is not to be expected that all population growth will be accompanied

by a proportionate increase in the demand for offices. Such increases come only with the expansion of the office types of activity. On the other hand, the economic maturing of a community may create additional demands for office space that are proportionately greater than population increases. A situation of this kind might arise after a period of rapid industrial expansion during which the establishment of service activities did not keep pace with the tide of immigration. In time, the increased demand for various services leads to the establishment of additional service facilities until a well-rounded assortment is made available.

The aggregate demand for office space fluctuates in response to general economic conditions. In time of depression, business failures reduce the number of enterprises requiring space, branch offices are closed, office workers are laid off, and the curtailment of space requirements is widespread. Returning prosperity reverses the process. In Table 36 the data for the years from 1930 to 1940, a period when the supply of office space remained virtually unchanged, illustrate the effect of business decline and recovery.

TABLE 36. OFFICE-BUILDING VACANCY *

Year	Per cent vacant	Year	Per cent vacant
1925	8.0	1933	26.9
1926	8.5	1934	27.4
1927	9.9	1935	26.0
1928	11.9	1936	22.7
1929	11.8	1937	19.1
1930	12.4	1938	18.1
1931	17.3	1939	17.8
1932	22.4	1940	17.0

* *Real Estate Analyst*, June 25, 1940.

The precise nature of the location is not so important in the selection of offices as in the selection of retail space. This statement applies more truly to some types of business than to others, but in general the differentials between optional locations within the commercial area are narrower for offices than for retail stores. On the other hand, the physical characteristics of the space and the services provided by the landlord are more important. Office-space buyers look to the attractiveness of the building, the quality of elevator service, the layout of space as

it affects efficient utilization for their purposes, natural light and ventilation, and the artificial lighting. For some types of business, certain street addresses or building names possess a prestige value.

While somewhat less importance is attached to location by office users than by merchants, this factor can by no means be ignored. Convenience is an important consideration, be it convenience for customers or for employees. Sales or service offices to which customers must come seek locations that are as accessible as possible to the groups that they serve. Offices that are to serve consumers coming from all parts of the city should be situated near the focal point of transportation facilities, although the precise location is not so important. Where the customer group is concentrated in one section of the community, in the downtown business area, for example, the maximum of convenience is more desirable. In general, the greater the distance traveled by customers, the greater the latitude in selecting a location. People who come several miles do not resent the necessity for going an extra block or two off the beaten path to reach their destination nearly so much as persons coming from close by resent the need for going around the corner.

Another consideration in selecting office space is the convenience of employees in getting to and from work. This factor gives an advantage to situations in the central business area, but, in cases where convenience to customers need not be considered, other areas may serve nearly as well.

Organizations that perform management functions prefer locations that are central to the activities that are being controlled or coordinated. Thus it is to the advantage of the central office of a local retail chain to be situated at a point most convenient to the greatest number of its units. Of course, other considerations may control, such as the advantage of convenience to banking services, accounting firms, selling agents, and other organizations that do business with the firm.

In some cases, businesses of like nature are found grouped for the purposes of facilitating interfirm communications or transactions. Such groupings often serve potential customers by facilitating shopping among the agencies. Again, the grouping may simply be the outgrowth of the attempts of the individual firms to locate at a point most convenient to their clienteles. Finally, some office buildings provide special facilities and services for one type of occupant. Thus doctors and dentists are often found in concentrations. Other factors that lead to medical groupings are the practice of referring patients from one specialist to another and the prestige that attaches to a location in a building in which prominent members of the profession are practicing.

DEMAND FOR WHOLESALE SPACE

Within our complicated mechanism for the distribution of goods, certain forces are at work that are having the effect of reducing the proportion of the urban area devoted to the wholesale district. In general it may be said that channels of distribution are shifting in such a way as to reduce the importance of wholesalers. Those functions in which the wholesaler specializes are being taken over by manufacturers and by retailers or groups of retailers. One of the underlying factors in these changes is the increasing standardization of commodities. The widespread use of grading and branding supported by national advertising facilitates buying from samples and catalogue descriptions and encourages direct selling to retailers by manufacturers. Other devices that are short-circuiting the wholesaler are selling through manufacturers' agents, public warehousing, wagon distribution, and group buying by retailers. Finally, many chain-store organizations are of sufficient size to assume all the wholesale functions. Thus, not only is a shrinkage occurring to the aggregate space required for the performance of wholesale activities in general, but also there is a geographical diffusion of the locus of these activities into the retail and industrial areas.¹¹

The decline of the wholesaler has not by any means led to his extinction. Table 37 presents data on the changes in 1929, 1935, and 1939 in the number of wholesalers in leading lines. It is apparent that the

TABLE 37. NUMBER OF WHOLESALERS BY TYPE OF BUSINESS, 1929, 1935, AND 1939 *

Type of business	Number of establishments		
	1929	1935	1939
Drugs.....	488	274	297
Dry goods, general line...	848	303	222
Electrical goods.....	2,182	2,437	3,072
Hardware, full line.....	953	630	772
Grocery.....	4,776	3,210	3,942

* U.S. Census of Distribution, 1929 and 1935; U.S. Census of Wholesale Trade, 1939.

¹¹ For more complete discussions of trends in wholesaling see Beckman and Engle, *Wholesaling* (New York: The Ronald Press Company, 1937), Chap. 27; and Edmund P. Learned, *Problems in Marketing* (New York: McGraw-Hill Book Company, Inc., 1936), Marshall Field case.

effect upon the wholesale function of shifts in marketing channels has varied among the several lines of merchandise.

Our next step is to consider the general location requirements of wholesalers. Convenience to transportation facilities is important. Railway track service is highly desirable where bulky and heavy goods are to be handled or where the volume of goods is so large that carload lots are dealt in. Where smaller volumes of goods are characteristic and where the items are compact and easily handled, the availability of truck transportation reduces the importance of trackage. The proximity of railway stations is advantageous not only for receiving and shipping goods but also for the convenience of buyers. For some types of business, ready access to public storage facilities is required. Another consideration is convenience to local sources of supply.

In general, wholesalers prefer to locate as closely as possible to the group that they serve. In the marketing of style goods, convenience is of particular importance because of the frequency of contacts with the retailer. For other products considerable storage space is required because of the bulk of the commodity, the great variety of items stocked, or the fact that buyers insist on inspecting the specific goods that they purchase. In such cases, the amount of space required may preclude a central location. Wholesalers who sell from catalogues, by mail, by telephone, or through an outside sales force do not require sites near their customers. Dealers with a national market best serve visiting buyers at points convenient to railroad terminals, hotels, and amusement areas.

The advantage of a location near competitors varies with the scope of the market and the nature of the commodity. In general, the proximity of dealers in the same line is desirable where the market to be served is regional or national, where shopping, comparison, and selection are important steps in the buying process, and where the function of price establishment is performed within the market formed by a cluster of wholesalers. Another advantage of the proximity of competitors is the opportunity such location affords for filling out orders when shortages occur in certain items.

Wholesalers find it less advantageous to seek one another's company when their market is local or covers only a part of the city, when the product is bulky, with storage and selling associated, where buyers do not visit the market, and when comparison is not important.¹²

¹² For the study on which this discussion of the clustering of wholesalers is based, see Committee on Regional Plan of New York and Its Environs, *Regional Survey of New York and Its Environs, 1B, Clothing and Textile Industries, Wholesale Markets and Retail, Shopping and Financial Districts* (New York: 1928), pp. 65-69.

DEMAND FOR INDUSTRIAL SPACE

The proportion of the urban area that is devoted to industrial uses varies considerably among cities. In all communities there is some demand for industrial space, if only for the small-scale service industries such as printing, baking, or bottling, which have but a local market. The area required for manufacturing is, of course, determined not only by the number of establishments, but also by the nature of the operations. In a city where steelmaking and processing is the major industry, the ratio of the industrial area to total area will be much higher than in a town of equal size in which jewelry manufacturing is the primary source of employment. In 1923, in Chicago, some 13.8 per cent of the total utilized land area was devoted to manufacturing.¹³ In 14 self-contained cities studied by Bartholomew, the average per cent of developed area occupied by light industrial uses was 3.21, with a range from 1.74 to 5.90 per cent. For heavy industrial use, the average was 2.70 per cent, with a range from 1.39 to 5.22 per cent.¹⁴

There are several factors that may give rise to changes in the quantity of industrial space required. Increasing demand is concomitant with the expansion of existing industries, the establishment of new industries, the immigration of plants from other areas, and certain changes in manufacturing methods, such as the shift to one-level operations requiring single-story plants. Intracity shifts of local industries will increase demand for space in certain areas. Decreasing demand for industrial space results from shrinking production, emigration of plants, and technical changes such as the availability of electrical power and the resulting elimination of private power plants. Predictions of future requirements for industrial space must be based on a careful analysis of existing industry and the factors that may lead to the expanding or contracting of operations; on a study of the characteristics of the community that may attract new industry or lead to the emigration of existing plants; and on a knowledge of the possibility of technological changes in local manufacturing processes that may affect land requirements.

For the most part, the quantity of demand for industrial space increases and decreases with the rise and fall of general business activity. In hard times, companies fail or consolidate, branch factories are closed,

¹³ Hoyt, Homer, *One Hundred Years of Land Values in Chicago* (Chicago: University of Chicago Press, 1933), p. 290.

¹⁴ Bartholomew, *op. cit.*, p. 138, Table 58. The National Housing Agency in a study of 22 cities found that total industrial use as a percentage of all developed land ranged from 9.8 per cent for small cities to 14.2 per cent for cities over 500,000 population.

and operations are curtailed. On the other hand, the development of new products is accelerated, with some effect on the demand for space. Intercity migration continues or is increased out of a compulsion to seek lower costs.¹⁵ In prosperous times, the demand for land increases with the rising birth rate of, and the expansion of, manufacturing activity that accompanies an improved market for the output.

In the foregoing discussion, no distinction has been made among types of industry. The most common classification is a simple division into heavy and light industry, but it will be more useful for our consideration of location requirements to subdivide industry on the basis of scope of market, volume of production, and weight and bulk of machinery and product. Let us first consider relatively large-scale industry, with a national market and producing a substantial volume of goods, for these are the attributes that the word "industry" first brings to mind.

A general location tendency apparent in most industrial areas is the increasing importance of the zone just beyond the city limits. Plants originally situated well within the developed area are moving outward. New plants are most likely to locate in this zone. In a study of the Chicago region it was found that the greatest relative industrial growth since 1920 has been in the mid-zone adjoining the city, while during the same period there has been some relative decline in the central and peripheral region. The most important intracity industrial migrations have been from the center to the edge of the built-up area.¹⁶ This experience is borne out by the situations in other cities. In Detroit, for example, there is a definite tendency for the central industrial areas to decline and for industrial expansion to take place at the outskirts of the developed area. The discussion to follow will suggest some of the reasons for this tendency.

Without adequate means for assembling raw materials and distributing finished products our modern industrial society would be impossible. It is to be expected, therefore, that transportation and industry will be found in juxtaposition on the urban landscape. Thus, the industrial areas of our cities cling to the major water and railroad routes and are served by trunk highways. Facilities for water transport are advantageous for manufacturing operations wherein the raw materials or finished products are bulky and heavy. A good example is the steel industry with

¹⁵ Swan points out that the slow, evolutionary process of industrial shifts to natural centers of production is accelerated in depression. Herbert S. Swan, "The Economic Location of Industrial Plants," *National Real Estate Journal*, April, 1939, p. 43.

¹⁶ Mitchell, William N., "Trends in Industrial Location in the Chicago Region since 1920," School of Business, University of Chicago, *Studies in Business Administration*, vol. IV, no. 1, p. 65, 1933.

plants at Gary, Detroit, Pittsburgh, and Cleveland located on water frontage to facilitate the water carriage of ore and coal, as well as of pig iron, steel, and other iron products. Where speed is essential, water transport is less useful, but it is the most economical method for many purposes.

Except for small-scale operations involving materials and products that are easily handled, most factories require rail connections even though highways and waterways are also used for shipping. Thus one of the primary industrial location requisites is direct access to a trunk-line track or a connecting line. The site must be of such shape as to permit the construction of a spur serving the factory buildings, and good switching service is essential. For industries with a national distribution of products the most favorable situation is on a belt line connecting a number of trunk lines. Where shipments of less than carload lots are to be made, facilities for handling this type of freight should be available.

Motor trucks are used by almost all industries, so that connections with main highways are highly desirable. For small plants producing commodities of relatively small scale, and with a local market, truck transportation may be used exclusively.¹⁷ In some large industries, as in the automobile industry, where a number of plants that produce parts are located at various points about the city, trucks are used extensively in interplant cartage. In general, a location just off the main routes has the advantage of avoiding traffic congestion.

The demand for plant locations close to the homes of the employees has diminished in recent years because of the widespread use of the private automobile by operatives. In Los Angeles it was found that, of the employees of ten centrally located plants, 63 per cent lived more than 2 miles from their jobs.¹⁸ Another survey of plants employing a total of 122,000 workers revealed that 35,000 employees' cars were driven to work daily and that another 25 per cent of the workers customarily rode to work with neighbors and friends in their cars. Thus more than one-half of the employees were independent of public transportation. In one plant employing 13,000 men it was estimated that more than 80 per cent of the workers owned cars.¹⁹ The pattern of homes of employees driving their cars to work in Detroit is well distributed over the city and

¹⁷ A study of industrial location in St. Louis found that, since 1913, 62 per cent of all new industries located at points without rail connections. See Walter C. K. Baumgarten, "The Location and Planning of Industrial Areas," *City Planning*, vol. 9, no. 2, pp. 56-72, April, 1933.

¹⁸ *Ibid.*

¹⁹ *Automobile Facts*, December, 1939, p. 3.

shows surprisingly little concentration in the vicinity of the plant location.²⁰

The result of this increasing fluidity of workers is to diminish the advantages of plant locations in the proximity of districts inhabited by the working classes. Other things being equal, of course, such a location is sought, and in all cases some public transportation should be convenient. It is probable that unskilled labor is particularly dependent on streetcar or bus. For plants employing women, proximity to their homes or adequate transport service is especially important.

The type of power supply to be used is a consideration in plant location. For large operations requiring great quantities of coal, a waterfront location will reduce costs of shipping fuel. The use of electric power permits considerable flexibility in location because of the relative ease with which power lines may be run for considerable distances. However, large users of off-peak service who often are required to install their own lines sometimes find an advantage in proximity to the central station. Plants producing their own hydroelectric power will, of course, require river frontage. The necessities for waste disposal or the need for a large volume of water in the industrial process likewise may require water frontage.

The geological characteristics of a desirable industrial site will depend upon the nature of the operations to be conducted on it. In all cases, soil conditions should be suitable for supporting the necessary structures and the plot should be properly drained. For most operations, level land is essential, although in some cases differences in levels may be useful for moving goods by gravity. The size and the shape of the parcel are controlled by the type of operation and the position of the railroad right of way. Sufficient land should be available for possible expansion.

One of the chief attractions of locations on the outskirts of cities is the low cost of land. This factor has grown in importance with the increasing use of one-floor plants and with the necessity of providing large parking areas for employees' cars. Another advantage of situations beyond the city limits is the substantial savings in taxes.

For certain industries, proximity to complementary industries is advantageous. Our high degree of industrial specialization has resulted in a great deal of partial fabrication of materials and the necessity for assembling numerous parts made by independent plants. The automobile industry provides a prime example of this procedure, for every car contains a large number of standard parts made by independent producers—tires, batteries, carburetors, spark plugs, upholstery, wheels, horns, shock

²⁰ *Street Traffic, City of Detroit*, prepared and published by the Michigan State Highway Department, Figs. 23, 24, and 25, 1937.

absorbers. At one time, it was said that the Ford car contained parts made by more than 5,000 producers.²¹ It is apparent that ease of communication and transportation between parts producers and assemblers is to be sought.

Manufacturing concerns that are seeking to rent or buy existing plants must consider the appropriateness of the buildings and layout to their intended operations. Some of the factors that are especially important are area, shape and design of the buildings, possibilities for expansion, strength of construction, trackage facilities, heat and power plants, floor capacities, natural light and ventilation, artificial lighting, fire protection, and elevators.

In some cities, Chicago, for example, special industrial districts have been developed. The land is planned for exclusively industrial occupancy and in some cases buildings are erected by the development company for rental to new concerns. All sites are served by belt-line railroad trackage and special service is provided for less-than-carload-lot shipments.

Up to this point we have given little attention to the location requirements of service industries with a local market and light industries requiring small space and no heavy machinery. In most cities, these types of production are often found in the central area adjoining the retail and office district. Since ground-floor space is not necessary, activities are carried on in the upper floors of loft buildings in which both light industrial and wholesale uses may be found. For service industries, such as printing, convenience to centrally located customers is important. In other cases, such as garment making, proximity to local retailers and convenience for out-of-town buyers are considerations. Some light industries serving the city do not seek central locations because distribution is diffused or because specialized buildings are required. Examples of these types are baking and bottling. For all light industries, adequate facilities for truck transportation are important, and, for concerns with a wider than local market, proximity to railroad terminals is advantageous.

LAND FOR PUBLIC AND SEMIPUBLIC USES

A surprisingly large proportion of urban area is devoted to nonprivate utilization. In 16 self-contained cities, Bartholomew found an average of nearly one-half of the developed area occupied by streets, parks, playgrounds, and public and semipublic uses.²² It is true that the demand for land for these purposes is founded on noncommercial considerations in a

²¹ Swan, *op. cit.*, Part II, March, 1939, p. 19.

²² Bartholomew, *op. cit.*, p. 138, Table 58.

strict sense; however, it will be found that rational location standards are generally applied and that sites are selected on the basis of convenience to those persons and agencies to be served.

Streets are the bones on which the flesh of the city is laid, but the physiological analogy breaks down in face of the fact that the skeletal structure matures in advance of all other development. Between 20 and 60 per cent of the developed area of our cities is devoted to the street pattern, with the average about one-third.²³ The total area required for streets increases as the city expands and, in relatively infrequent cases, through the opening of new streets in developed areas or the widening of existing thoroughfares. Street openings or widenings by the municipality require that the city bid for the property in the open market in competition with private interests or that the property be acquired by condemnation at a price presumed to represent its market value.

For the most part, urban street patterns evolve by a process of accretion, whereby streets in new areas are tied in with the existing framework. The major highways leading into the community form the main members of the structure and county roads are usually fitted in without change. Minor streets are laid out by subdividers. Control over street design is ordinarily exercised by the city or county engineer or by planning commissions where they exist. The problems of city planning are too involved for discussion here, but it may be said that capacity of the street system for facilitating traffic movements is a major determinant of the efficiency of the city as an economic mechanism.

Parks and playgrounds constitute an average of about 6 per cent of the developed area of our cities, with a range among cities from 1 to 20 per cent.²⁴ Variations in this proportion reflect local differences in policy and in farsightedness in acquiring public areas in advance of need. In general, an effort is made to distribute these public areas over the city in accordance with the population pattern, but too often political considerations or special circumstances result in geographical inequities. Parks are often located to exploit natural advantages such as water frontage or hilltops.

The sites for public schools, fire stations, and police stations are generally chosen with due consideration of convenience. In the case of schools, studies are made of the distribution of the school population, and forecasts of future city growth are developed. Fire and police stations are located with a view to maximum efficiency in serving property owners and individuals. Public office buildings such as city halls and county courthouses are placed in central locations as the focal points of the areas

²³ *Ibid.*

²⁴ *Ibid.*

that they serve. Furthermore, such a situation facilitates the frequent contacts with businessmen, lawyers, and business organizations.

Semipublic uses such as hospitals, churches, and other institutions find space in accordance with their own peculiar requirements, often not too rational. Churches seek convenience for their membership, requiring a central location if the members are scattered over the entire city or a neighborhood location if the parishioners are fairly concentrated in one section. Hospitals may seek downtown sites if a major aim is to serve emergency cases or quiet outlying locations in the interests of convalescents. In some cases, institutional locations are determined by political pressures or by the whim or vanity of influential donors.

CHAPTER 6

THE CONSTRUCTION INDUSTRY

At this point in this volume, we are turning from the consideration of the factors of demand for the services of urban land to a treatment of supply factors. When both sides of the market have been discussed, we shall be ready to examine the interactions of demand and supply and the relationships between demand and supply and land use, rent, and value.

This chapter and the succeeding one will deal with the processes involved in creating and increasing the supply of usable and valuable urban space. Mere open space, the surface of the earth that is the elemental gift of nature, is but one component of the kind of space that has value in the urban land market. The provision of this valuable space involves production and fabrication in the same sense as in a manufactured product such as an automobile. The raw materials must be processed and prepared for use. The commodity that we are discussing—urban real estate—is produced by combining raw land with various physical improvements and mechanical facilities and by wedding this semi-processed element to a structure. The land provides the area and support and the structure serves as shelter for the functions to be performed. It is for this form of manufactured space that there is effective demand of potential users in the urban land market. Neither land nor building is the more important element in the final product nor can the separate values of their services be differentiated and measured.

Before considering the processes of land preparation and building, we shall look at the construction industry as a whole in its relationship with the general economy and at the nature of the fluctuations in construction activity.

General Nature of the Industry

In the broadest sense, the construction industry includes all the diverse, loosely integrated groups and organizations that are involved in the

processing of land and the erection of structures. The industry is engaged in three general types of activity: (1) residential building of houses, flats, and apartment structures; (2) nonresidential construction of commercial, industrial, and certain types of institutional buildings; and (3) public works involving such activities as the laying of streets and sewers and the construction of bridges and subways.

The products of the construction industry are highly diverse. Each project, with few exceptions, is a special design, engineering, and production problem. Limited standardization is found in some public-works projects, in some industrial building, and in large-scale housing projects. Characteristically, the products of the construction industry are of great size, bulk, and weight; they are fixed in space in permanent attachment to the earth; they are semipermanent, rigid and difficult to disassemble or alter. For example, a single-story, four-room house without a basement may weigh more than 92,000 pounds and will displace in terms of cubic feet more space than any other class of durable goods with the exception of a ship. The addition of a basement would nearly double the weight, while an exterior wall of brick would bring the aggregated weight to more than 260,000 pounds. The multiplicity of parts involved in the fabrication of a structure is illustrated by the fact that the parts required for a house of average size total some 30,000 compared to 5,000 parts that go into an automobile or 17,000 parts required to produce a military tank.¹

It is not possible to examine the nature of the construction industry without considering residential building, nonresidential, and public works together. Although the nature of the products differ in important respects, the factors of demand are related, and, on the production side, there are common sources of material, labor, and managerial services. Many of the factors of production move freely from one type of construction activity to another. But we shall see that one outstanding characteristic of the house-building industry is the large number of small contractors and builders who operate with little capital and who restrict their activities to the fabrication of single-family homes.

Productivity

The tremendous capacity of the construction industry and the variability in the level of its activity are illustrated in Table 38. At the peak in 1927, the volume of all types of construction exceeded 11 billion dollars; in 1933 the low point was reached at only 2.5 billion dollars. Since the peak year of 1927, the highest prewar level was reached in 1941, when

¹ Colean, Miles L., *American Housing* (New York: The Twentieth Century Fund, Inc., 1944), p. 39.

TABLE 38. CONSTRUCTION ACTIVITY IN UNITED STATES, 1915-1946, IN 1947 PRICES

(billions of dollars) *

Year	Total	New construction					Maintenance and repair
		Total new construc- tion	Public	Private			
				Total	Resi- dential	Nonresi- dential	
1915	\$ 4 6	\$ 2 9	\$ 0.7	\$2.2	\$1.0	\$1.3	\$1 7
1916	5.2	3 5	0.7	2.8	1.1	1.7	1 8
1917	6 1	4 1	1.3	2.9	0 9	2.0	2 0
1918	7.0	4 7	2.2	2.5	0 7	1.8	2 3
1919	8.4	5.7	2.0	3.8	1.5	2 2	2 6
1920	9 1	6.1	1.3	4.8	1.5	3.2	3.0
1921	8.2	5.5	1.6	4.0	1.7	2.3	2 6
1922	9 8	7.0	1 7	5.4	2.7	2.7	2 7
1923	11.6	8.6	1 6	7.0	3 6	3.4	3.0
1924	12.8	9.6	1.9	7.7	4.2	3.3	3.1
1925	13 9	10.6	2.1	8.5	4.5	3.9	3.3
1926	14 7	11.2	2.1	9.1	4.5	4.6	3.4
1927	14.8	11.1	2.4	8.8	4.2	4.6	3.6
1928	14.6	10 8	2.5	8.3	3.9	4.5	3.7
1929	13.8	9 9	2.4	7.5	2.8	4.7	3.9
1930	11.6	8.1	2 8	5.3	1.4	3.9	3.5
1931	8.9	6 0	2.6	3.4	1.2	2.2	2 9
1932	5.4	3.3	1 8	1.5	0.5	1.0	2 2
1933	4 4	2 2	1.2	1.0	0.3	0.7	2 2
1934	5.7	2.8	1.5	1.2	0.4	0.9	2 3
1935	6.1	3.1	1.5	1.6	0.7	1.0	2 6
1936	8.8	4.7	2.2	2.5	1.1	1.4	3.0
1937	9.3	5.3	2.0	3.3	1.4	1.9	3 2
1938	9.3	5.0	2 1	2.9	1.5	1.4	3 1
1939	10.4	6.1	2.4	3.6	2.1	1.5	3 3
1940	11.3	6.8	2.6	4.2	2.4	1.8	3 6
1941	14.9	10.3	5.1	5.2	2.8	2.5	3 9
1942	17.6	13 4	10.4	3.0	1.3	1.6	3 9
1943	11.8	7.8	6.1	1.7	0.7	1.0	4 0
1944	8.4	4.1	2.3	1.7	0.5	1.2	4 3
1945	9.3	4 6	2.0	2.5	0.7	1.9	4 7
1946	15.7	10.0	2.2	7.9	3.3	4.6	5 7

* Bureau of Foreign and Domestic Commerce, U.S. Department of Commerce, *Construction and Construction Materials Industry Report*, May, 1947

NOTE: Construction activity is defined as value of work put-in-place. Private nonresidential construction includes farm, public-utility, industrial, and commercial construction. Private residential construction excludes farm housing. Public housing is included in the public-construction category.

9.6 billion dollars was spent on construction.² Over the period from 1920 through 1940, the average annual construction expenditure was about 7.1 billion dollars. For 1946, the total was 11.7 billion dollars and 14.9 billion dollars for 1947. Chart 3 presents all construction, including expenditures for maintenance and repair from 1915.

The proportion of construction expenditure accounted for by nonfarm residential building has varied from a high point of 47.6 per cent in 1924

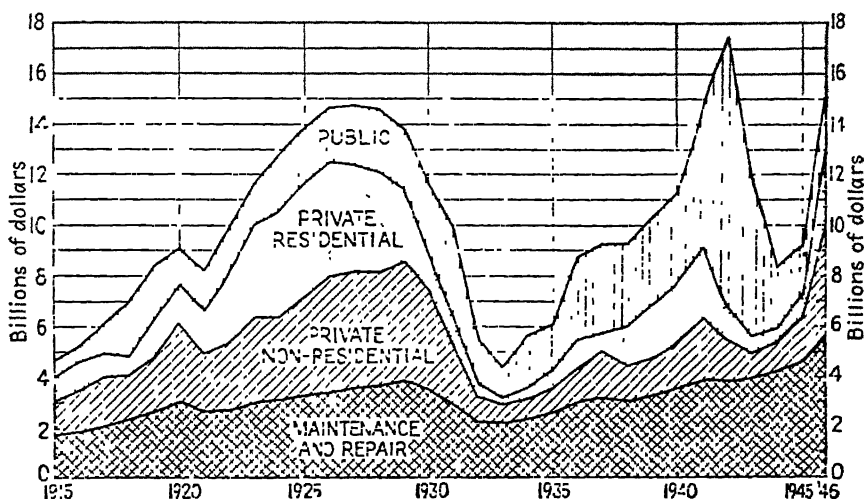


CHART 3. Construction activity in the United States, 1915-1946, in current prices. (Bureau of Foreign and Domestic Commerce, U.S. Department of Commerce, *Construction and Construction Materials Industry Report*, May, 1947.)

to a low level of 19.8 per cent in 1932 and 15 per cent in 1943. Nonfarm residential building accounted for about one-third of the dollar volume of all construction in 1947. At the peak of its activity in 1925, the housing branch of the industry produced 937,000 dwelling units; the low level was reached in 1933, when only 93,000 units were fabricated (Table 39). The average annual housing production since 1920 has been about 500,000 units.

Importance in the National Economy

By any measure of economic importance, the construction industry ranks very high among all the industries of the country. This important fact is illustrated in Table 40, which shows for recent years the contribution of the construction industry in its relationship to the gross national

² A total expenditure of 13.5 billion dollars was reported in 1942, but the figure included 4.9 billion dollars in military and naval construction.

TABLE 39. TOTAL NEW NONFARM FAMILY DWELLING UNITS STARTED, BY TYPE OF FINANCING, BY YEAR, 1900-1946
(in thousands of dwelling units) *

Year	Total	Privately financed	Publicly financed	Year	Total	Privately financed	Publicly financed
1900	204	204		1924	893	893	
1901	303	303		1925	937	937	
1902	327	327		1926	849	849	
1903	411	411		1927	810	810	
1904	416	416		1928	753	753	
1905	459	459		1929	509	509	
1906	464	464		1930	330	330	
1907	433	433		1931	254	254	
1908	438	438		1932	134	134	
1909	573	573		1933	93	93	
1910	505	505		1934	126	126	
1911	501	501		1935	216	216	
1912	476	476		1936	316	304	12
1913	435	435		1937	334	332	2
1914	414	414		1938	408	399	9
1915	414	414		1939	508	458	50
1916	394	394		1940	601	530	71
1917	277	277		1941	722	619	103 ‡
1918	174 †	174	†	1942	494	301	193 ‡
1919	405 †	405	†	1943	352	184	168 ‡
1920	247	247		1944	171	139	32 ‡
1921	449	449		1945	226	208 §	18 ‡
1922	716	716		1946	776	663 §	114 ||
1923	871	871					

* Twentieth Century Fund—1900-1919; National Bureau of Economic Research—1920-1929; Bureau of Labor Statistics, U.S. Department of Labor for privately financed, Federal Public Housing Authority for publicly financed—1930-1946. Table presented on p. 2 in the *Housing Statistics Handbook*, Housing and Home Finance Agency, Government Printing Office, Washington, D.C., 1947.

† Excludes 5,998 publicly financed dwelling units completed in 1918 and 1919 by the U.S. Housing Corporation. Data as to when these units were started are not available.

‡ A large porportion of this housing is comprised of temporary wartime units.

§ Data for 1945 and 1946 adjusted for lapsed building permits and for lag between issuance of permit and actual start of construction.

|| Excludes veterans' housing units provided by conversion, stopgap family accommodations, and veterans' housing developed with local funds, which is not otherwise part of the Federal Public Housing Authority Title V program.

TABLE 40. PERCENTAGE OF CONSTRUCTION COMPONENTS IN THE GROSS NATIONAL PRODUCT *

Periods	Residential construction	Non-residential construction	Durable consumers goods	All other	Total
Average 1919-1935	3.9	7.2	9.5	79.4	100.0
1939	2.7	5.2	7.2	84.9	100.0
1940	2.9	4.8	8.4	83.9	100.0
1941	2.9	6.1	9.1	81.9	100.0
1942 †	1.5	6.9	6.3	85.3	100.0
1943 †	0.8	4.2	6.6	88.4	100.0
1944 †	0.4	3.1	6.7	89.8	100.0
1945 †	0.9	3.8	7.4	87.9	100.0

* *Survey of Current Business*, February, 1946; original data from Bureau of Labor Statistics and U.S. Department of Commerce. War expenditures are excluded.

† Data are influenced by war limitations of construction and manufacturing.

product.³ During the period from 1919 through 1935, the gross national product averaged 73 billion dollars per year. Construction activity averaged 11.1 per cent of this total as compared to a level of 9.5 per cent for all consumers' durable goods. The figures for 1939 still reflect the post-depression slump in construction activity, but by 1941 the industry had revived to the extent that it contributed 9 per cent of the gross national product. Following Pearl Harbor, the curtailment of all but essential construction cut the industry to an all-time low in 1944 of only 3.5 per cent. From this low point, a substantial recovery is already in evidence.

Another measure of the economic importance of construction is a comparison of employment in the industry with employment in other leading industrial classifications. For example, the U.S. Census of Manufacturers in 1939 showed that among the manufacturing industries that were classified (the construction industry is not included as a manufacturing industry), the textile industry ranked first in employment with some 1,100,000 workers. For the same year, the Bureau of Labor Statistics estimated that about 1,950,000 were employed in construction. Thus the construc-

³ The gross national product is a measure of all expenditures, including government spending, consumer spending for goods and services, and private gross capital formation.

tion industry was more important in the labor market than any manufacturing industry. It employed nearly twice as many workers as the steel and iron industry and five times as many as the automobile industry. While these relationships fluctuate with changes in economic conditions, the predominance of the construction industry has been well maintained.

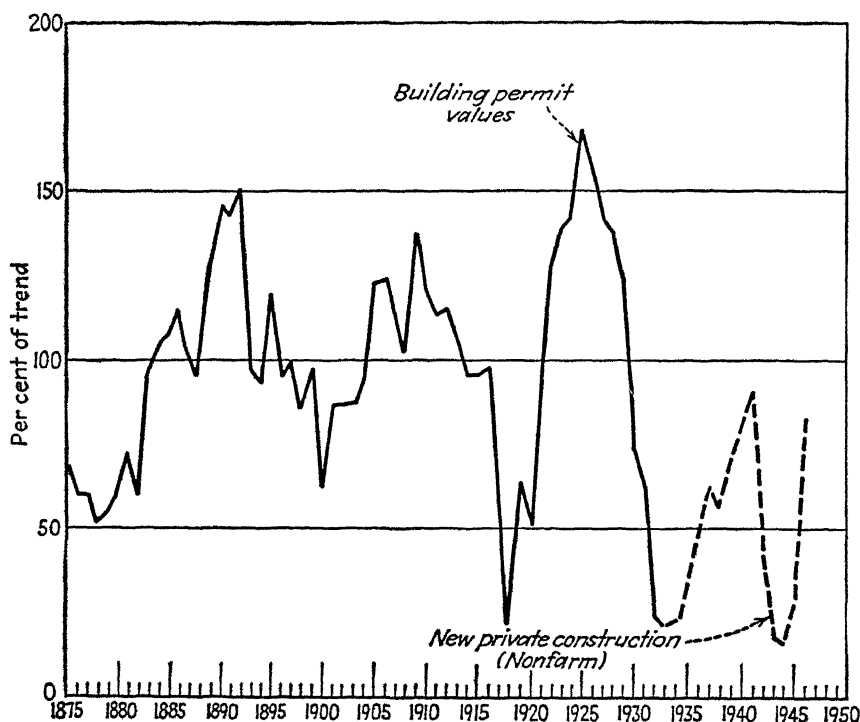


CHART 4. New private nonfarm construction as a percentage of long-term trends. (*Survey of Current Business*, November, 1946, p. 8. Trend for building permit values was calculated for 1875-1933; building permit values and new construction were deflated by use of cost indexes.)

In terms of value of product, the construction industry has been one of the leading industries, although its leadership is less marked in times of depression.

The basic position of the construction industry in the national economy has been recognized in pump-priming activities of governments in the face of depression. Many New Deal agencies established to rejuvenate the economy were directed to the stimulation of construction to provide both direct and secondary employment. It was recognized that construction draws upon a wide variety of materials and fabricated products and

that its beneficent influence spreads widely through the economy in the effect on many extractive and processing activities. Another advantage of the industry for pump-priming purposes is the opportunity for the employment of unskilled labor in large numbers in many kinds of construction. Furthermore, the man-hour input in building is high and is

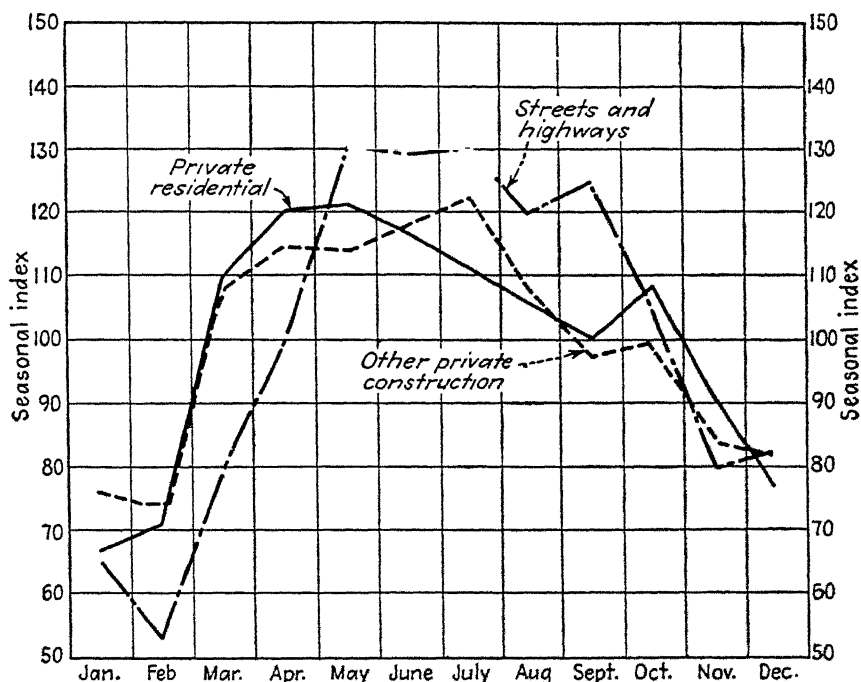


CHART 5. Seasonal fluctuation in construction contracts awarded in 37 Eastern states, 1940. (Board of Governors of the Federal Reserve System.)

extended over a long period of time because of the comparatively long production period that characterizes most construction projects.

Cyclical Movements

The construction industry is characterized by wide fluctuations in activity, both seasonal and cyclical. The statistical measures of activity, based upon building permit records and reports on contracts let, allow us to examine the fluctuations in construction over many decades. Chart 4 records the ups and downs of the industry from 1875.

Superimposed upon the wide, irregular secular movements in construction activity is an annual or seasonal cycle of considerable consistency from year to year (Chart 5). The form and amplitude of the

seasonal curve for all types of construction are similar and do not vary much over the years. The most active season is the spring, with a secondary peak in the fall; a minor slump occurs during the summer and a major decline in the winter. The curve is based on data which relate to the initiating of construction projects so that the contours represent new activity rather than levels of expenditure or employment. Thus the summer decline is a falling off in terms of new projects being started rather than in production activity. On the other hand, the winter season in many parts of the country is unfavorable for construction activities and thus the winter slump is in terms both of new projects and of fabrication. In spite of the fact that methods have been developed to permit building to go on in all types of weather, the costs of bad-weather operations are often prohibitive. Weather seems to be a major influence not only on operating conditions but also on consumer habits.

Since seasonal variation occurs even where winters are mild, weather alone cannot explain seasonality. In housing, for example, the buying market is usually most active in the spring, when there is a strong psychological urge for more open and commodious living accommodations. Uniform leasing dates also tend to concentrate house hunting in definite periods. Other factors that impart seasonal regularity to the construction industry are the bulge in repair and maintenance work in the spring, the scheduling of commercial construction and remodeling for slack seasons of business, and the timing of industrial construction for off-peak seasons.

Amplitude and Length of Cycles

Only a few industries experience wider fluctuations than the construction industry. Variations are twice as wide as in 70 industries, according to one authority, and at least three times as wide as in 40 industries.⁴ While general business cycles usually fluctuate within a range of 20 per cent above or below normal, the major building cycles deviate from 40 to 60 per cent.⁵ Within these major cycles are minor fluctuations of much less degree and length.

In terms of number of projects, residential activity is generally at a higher level than nonresidential building. However, nonresidential construction fluctuates less violently than does home building. For example, between 1920 and 1925, the residential index jumped by 290 per cent as

⁴ Burns, A. F., *Production Trends in the United States Since 1870* (New York: National Bureau of Economic Research, Inc., 1934), pp. 230-233.

⁵ *Building Cycles in the United States, 1875-1932*, memorandum by John R. Riggleman, Division of Building and Housing, Bureau of Standards, U.S. Department of Commerce, for the National Conference on Construction, Oct. 13, 1932, p. 10.

compared with 71 per cent for the other classification. From 1925 to the bottom of the depression in 1933, the residential index fell by 96 per cent in contrast to 83 per cent. At the low point, the number of residential projects was less than the number of nonresidential projects.⁶ In part, the level of nonresidential construction in 1933 reflected the New Deal policy of pump priming by public works. Prior to this time, the swings of residential and nonresidential activity moved together, though with different amplitudes. It is now urged by many people that public-works activities be reduced to a minimum in times of active construction in the housing and commercial fields and be increased to offset declines in private construction. Such a policy would tend to smooth the construction cycle and, presumably, the general business cycle.

The building cycle seems to have a period of from 15 to 20 years. Following the Civil War, the first major cycle extended from 1878 to 1900 (12 years upswing and 10 years downswing). The second major cycle covered the 18-year period from 1900 to 1918 (9 years up and 9 years down). The third complete period ran from 1918 to 1933 (7 years up and 8 years down). The decreasing lengths of these cycles over the period from 1878 to 1933 is not believed to be significant, owing to the great influence of the First World War on the last cycle. Minor cycles within the major cycles were observed to cover about the same period as the general business cycle.⁷ At present we are in the upswing of a building cycle that started from the low point of 1933. It is impossible to predict the effects of the late war on the length and amplitude of the movement, though there are indications that the delaying effect of war restrictions on residential and commercial building will contribute to the violence of the postwar building boom.

Cyclical Sequence of Events

The theoretical sequence of events in the building cycle can be briefly described. Starting with the low point in activity, the first impulse to recovery arises from a stirring in the demand for space. This demand may reflect increasing family incomes or increasing commercial and industrial activity or both. It may also be conditioned by population pressures accumulating through natural increase or created by cityward migrations. When demand has pressed upon the existing supply sufficiently

⁶ With a base period of 1920 to 1930, the residential index in the depression year of 1920 was 37 (in 29 cities) compared to a nonresidential index of 75. In 1933, the relation was 7 to 22. Clarence D. Long, Jr., *Building Cycles and the Theory of Investment* (Princeton, N.J.: Princeton University Press, 1940), Appendix B, Sec. 3, pp. 228-229.

⁷ Riggleman, *op. cit.*, p. 8.

to influence real estate prices and rents, new construction will be stimulated. Potential users of space will be forced by the shortage to build directly for their own occupancy or will bid up the prices and rents for existing space to a point where new building for sale and investment will be attractively profitable. The heightened construction activity will spread its influence throughout the economy and, by increasing the national income, will add a further stimulus to the demand for space. In an environment of rising costs and more rapidly rising prices, a building boom develops.

The building boom typically carries beyond the point in time when the forces of demand begin to weaken. The lack of adequate market information and the necessarily long period required for planning and construction contribute to this insensitivity. Thus, as a result of these and other market imperfections, the self-regulating mechanisms of the market fail to modulate building activity in proportion to diminished demand, and an oversupply of space develops. Ultimately this oversupply brings about a weakening in prices and rents, and construction activity slowly grinds to a stop, or more properly, to a low level of activity. The weakened demand and the surplus of space combine to create high vacancies, which, enforced by low rents, bring about financial distress and foreclosure for many properties. The unfavorable mortgage experience influences lending policy, tends to freeze the mortgage market, and further inhibits construction activity. Because of the durability of the product, the oversupply of space created by the building boom may hang over the market for some time. Furthermore, the memory of the mortgage lenders is long, and the flow of investment funds into new construction is slow to resume. Thus recovery in the construction industry may follow by some time the revival in general business conditions. Other factors that contribute to this lag, in addition to the hangover of space and the timidity of lenders, are the disorganization of the industry during slack times, the dissolution of contracting organizations and the time required to reconstitute them, the movement of skilled workers out of the building industry into other lines of endeavor, and the failure, in hard times, to maintain the complement of skilled craftsmen at a reasonable level through apprentice training. All these factors impede the recovery of construction activity even when other factors are favorable.

Cyclical Factors

There are many factors that contribute to the cyclical swings of building activity, and, though it is not possible to measure the differences in the influences that they exert, certain of these forces can be identified as

the most important. In the field of residential construction, changes in family income are said to play a central role.⁸ Of course, family incomes, in turn, are greatly affected by the underlying business cycle and reflect the general economic health of the country; within local housing markets, the business conditions in the community determine income levels. Changes in family incomes influence construction activity in a variety of ways. Family formation, through marriages, is affected by income levels and income prospects, since rising incomes encourage young people to establish their own households. Rising incomes also tend to attract new families to the community seeking to share in the prosperity. Another effect of improved family financial capacity is the undoubling of families that have been forced to share dwelling space because of low earnings or unemployment. Finally, and perhaps the most important of all, is the widespread tendency for rising incomes to be reflected in a desire by families of all income classes to improve their housing status. As incomes rise, expenditures of all types are increased, including housing, and there is a general upward push of families along the housing scale. This demand for better accommodations results in a strong demand for new dwellings at the levels where new construction is normally introduced into the market.⁹ Rent levels, which affect residential building activity in a number of ways, are influenced by family income changes. When incomes are falling, rents tend to weaken and the building of rental units becomes less attractive to investors. From the consumer's viewpoint, the level of rents affects the relative advantages of buying a new home and renting an existing dwelling; when rents are falling faster than construction costs, a rented unit is a better buy than a new home.

The influence of construction costs on the rate of building is difficult to evaluate. Theoretically, rising costs will tend to check construction, but, historically, costs have shown some tendency to move with rather than against building activity. In the case of extreme cost increases, however, the influence of this factor has been apparent, as in 1920 and 1947. Furthermore, there is some evidence that a favorable cost situation is important at the point of upturn in the building cycle.¹⁰ High and rising costs were found by Newman not to be a necessary condition to the

⁸ Colean, Miles L., *op. cit.*, p. 195.

⁹ Newcomb, Robinson, *Housing Requirements—Appendix to Standards for Measuring Housing Needs*, Report of the Special Committee to Study Problems of American Small Business, U.S. Senate, 79th Congress, Senate Committee Print, no. 8, 79th Congress, 2nd Session (Washington, D.C.: Government Printing Office, 1946).

¹⁰ Chawner, Lowell J., "The Residential Building Process," in *Housing, the Continuing Problem* (Washington, D.C.: National Resources Planning Board, December, 1940), p. 21.

reversal of a building boom.¹¹ In general, then, we may conclude that, though costs do have an effect on the building cycle, other factors, particularly on the demand side, typically have sufficient weight to counter-balance cost influences.

Another major factor in the building cycle, both residential and non-residential, is the geographical shifting of population. We are most familiar with the farm-city migrations that were responsible for the great increase in the population of urban areas during the first three decades of this century. Even more closely at hand is the effect of migrations of large numbers of workers to the centers of war industry. These migratory movements have resulted in dramatic increases in the demand for housing and for other types of construction. Thus increases in economic opportunity and in available jobs and the normal accompaniment of rising family incomes are most important factors in stimulating new construction. It may be added that population shifts within a community, even though the total population may not be increasing, will give rise to housing demand in new areas and will encourage building activity for a time until the effect of the vacancies in the housing that is being abandoned is felt throughout the entire market in weakening rents and sales prices.

The influences that have been described as leading to major building cycles are also the primary causes of minor fluctuations of 4 to 5 years in span. However, conditions in the money market have been found to have importance in the minor cyclical movements, though they seem to play a comparatively unimportant role in the major movements.¹² The ease of borrowing in the long-term money market is probably more important than the level of interest rates.

Nonresidential construction responds to a somewhat different, though related, set of influences than account directly for fluctuations in residential building. Industrial expansion is influenced by general business conditions and prospects. In times of prosperity, when the demand for manufactured products is heavy and orders are piling up, when credit is easy and the capital market favorable for new issues, plant expansion is encouraged and there is an increase in the erection of branch plants and in the number of new enterprises that require plant facilities. Increased industrial capacity means an increase in job opportunities, which generally results in the immigration of additional workers to urban areas and an increase in the demand for housing.

The expansion of commercial facilities is usually stimulated by favor-

¹¹ Newman, William H., *The Building Industry and Business Cycles* (Chicago: The University of Chicago Press, 1935), pp. 20-24.

¹² Newman, *op. cit.*, p. 50.

able local business conditions, by the growth of population, and by the extension of residential areas. As the general purchasing power of the community expands, additional retail, financial, and service facilities are required both in the central business district and in outlying subcenters. The outward push of residential construction also gives rise to the need for public works in the form of streets and utility extensions. In the past, the erection of public buildings and the expansion of public-service facilities such as waterworks or sewage-disposal plants have been made in times of prosperity when tax receipts were favorable and municipal borrowing easy. In recent years there has been much talk of using public works in times of depression to offset the decline in other types of building, but it remains to be seen whether such a policy is practicable and will be generally adopted.

Cycle History, 1918 to 1946

A recounting of the stages of the building cycle between the end of the First World War and the present time will serve to illustrate the theoretical discussion of cyclical phenomena and will give perspective to the present situation and future prospects.

At the end of the First World War in November, 1918, the level of residential building was low because of wartime restrictions, but the general construction industry was busy with the building of war facilities. Immediately following the Armistice, there was a six months' period of uncertainty. In spite of a strong demand for all types of construction and rising rents, very little activity occurred. One reason was the time of the year, the winter off-season for building. Another contributing factor was uncertainty as to future movements of prices and costs and the feeling that building costs would decline from the wartime levels. Shortages of certain building materials and building labor existed, and building money was not readily available in all places. But by the early months of 1919 most of the obstacles to building revival were overcome and all types of construction increased rapidly.

Recovery in the construction industry during this period was closely tied to the general business boom; both were rising precipitously. However, residential construction, after a brief spurt to a peak in June, 1919, was somewhat crowded out by the pressure for commercial and industrial facilities. So great was the backlog of orders for manufactured goods that business firms pushed their building plans to fruition regardless of mounting construction costs.

The end of the war had found the inventories of many building materials at a low point. Wartime output had been low and wartime construction had absorbed much of the available supply. The burgeoning

construction activity had run ahead of postwar production so that, by the end of 1920, severe material shortages had developed and were accompanied by material prices at new high levels. The expanded need for building labor brought about labor shortages in many areas, which handicapped the advance of building activity.

The building year ending in the spring of 1920 witnessed an extraordinary inflation in building-material prices. While the general level advanced 72 per cent, the wholesale price of lumber rose 125 per cent and paint and brick increased 3 and $3\frac{1}{2}$ times their prewar level. Union wage scales in the building trades advanced some 35 per cent. At the same time, rents were advancing, moderately during the first half of 1919 but more rapidly during the next 12 months to a year's increase of 18 per cent. Other inflationary factors were the extensive undoubling of the families of returned servicemen, a generally high level of wages and family incomes, an increased rate of migration from farm to city, and a rise in the marriage rate from 9.7 per thousand population in 1918 to 12.0 per thousand in 1920.

The postwar construction boom was not a year old when the first intimations of recession appeared in the form of a weakening of residential building activity. The downturn in all types of construction contracts preceded the general collapse in commodity prices and business activity. Transportation difficulties in the form of a shortage of cars and a strike contributed to the confusion. The building industry lost more than half of its momentum in terms of contracts awarded; residential building lost 67 per cent from its peak in July, 1919, to December, 1920; nonresidential building declined 61 per cent from its peak in January, 1920, to February, 1921. The recession did not go far in correcting the boom-born increase in building-material prices. At the low point in early 1922, when the all-commodity wholesale price index was only 34 per cent above the prewar level, the level of building-material prices was still 72 per cent above prewar. Union wage scales suffered little decline during the period. Although there was some complaint that the rent control laws in some states were discouraging new rental building, it is probable that the major deterrents were the high level of building costs and the uncertainty as to the level at which prices would stabilize.

Early in 1921, the construction industry started the sustained upward movement that culminated in the high volume of the middle twenties. Building-material prices rallied from their temporary retreat to stabilize at a level of 90 to 100 per cent above the prewar level; this point was about double the relative position of the level of wholesale commodity prices. This discrepancy undoubtedly contributed to the overextension of home buyers encouraged by high appraisals and liberal credit, which

characterized the building boom of the twenties. It led to an overbuilding of the luxury market and may have been responsible for the fact that residential building turned downward after 1925, well in advance of the general business collapse.

The building boom of the twenties reached its peak in the years 1925 and 1926. The former year was the top for residential construction, when 937,000 dwelling units were produced, a level never before reached and not approached in subsequent years until 1946. Nonresidential building climbed to a peak in 1926 and 1927 and sustained its level with little change through 1929. At the top, total construction activity was double the 1920 level; expenditures in residential building were four times the 1920 amount. By the end of 1929, residential construction had registered a 31 per cent recession from its level of the previous year. The total value of new contracts for all types of construction had fallen 16 per cent. But the impetus of general business activity pushed new commercial construction 10 per cent and industrial building 18 per cent above the 1928 level.¹³ Building-material prices and building costs were generally higher in 1929 than in 1928, but there were already signs of a leveling off toward the decline, which was first registered in the early months of 1930.¹⁴

After 1929, building activity fell off rapidly to an exceptionally low level, which at the bottom in 1933 was 75 per cent below the 1920 to 1929 average in dollar volume (Table 38). Public works were far better sustained, for the drop was limited to 36 per cent. The collapse of the building industry was accompanied by the other phenomena of a real estate depression. Vacancies in all types of property began to climb; foreclosures increased to flood stage; rents and real estate prices declined sharply, and real estate transfers dried up. The mortgage market was frozen.

Recovery from the stage of complete prostration in the building industry accompanied the revival of general business. Some building activity was the product of the public-works program; from 1931 through 1936, public construction ranged around one-half of all construction expenditures. By 1935, private building had begun to show signs of recovery in an atmosphere of rising rents and prices and increased real estate activity. There were indications of a shortage of single-family dwellings in many localities, and commercial rents began to move upward. However, even in 1935, some 55 per cent of all construction contracts were publicly financed.¹⁵

By 1937, the recovery in the construction industry was measured by

¹³ *Survey of Current Business*, January, 1930.

¹⁴ *The Real Estate Analyst*, June 23, 1939, p. 144.

¹⁵ *Survey of Current Business*, March, 1936.

an increase in residential construction to the production of 334,000 dwelling units compared with a depression low of 93,000 in 1933. Total construction values measured by a Federal Reserve Index were more than double the low levels of the decade but still only one-half the 1929 level. The upward trend was momentarily reversed in 1938, mainly as a reflection of the business recession in late 1937. The decline in all types of construction was only 3 per cent, primarily because of a falling off in factory building and commercial construction. Residential building ran counter to the decline and continued to increase, in part in response to the Public Works Administration program and a decline in construction costs, but mainly because of strong underlying forces of demand and the growing effectiveness of the Federal Housing Administration mortgage insurance scheme.

Concomitant with the outbreak of the war in Europe in 1939, there was a resumption in the upward trend in industrial and commercial building. Residential building also advanced, aided by the public housing program and a stable cost level. The years 1940 and 1941 brought to bear the influence of a war economy on the construction industry. In 1940 the expenditures for factory construction under the stimulus of government contract awards were up 68 per cent over 1939. Commercial building rose about 17 per cent and residential construction reached a level of 601,000 units in 1940 and a post-depression peak of 722,000 units in 1941. The rise in materials and labor costs was not an effective offset to the stimulus of rising incomes and pressing demand as workers moved into the centers of war production.

The entry of the United States into the war brought drastic controls on construction. Restrictions imposed in November, 1941, limited building to that which was essential to the war effort. As a result, residential construction was cut to activity that reflected only the needs of war workers and dropped substantially in 1942. The number of dwelling units produced was 494,000 in 1942, 352,000 in 1943, and 171,000 in 1944. At the same time, nonresidential construction reached a high point in 1942 as a result of vast military expenditures. By 1943, the total of all construction expenditures was half the 1942 level, and, with the completion of the major war construction program and the shortages of critical materials, only the minimum necessary building was authorized. The year 1944 saw a further decline in all types of building to a low point for the war period. In 1945 there was some relaxation of wartime controls and the record shows an increase of moderate amount in residential and nonresidential building; the number of dwelling units started rose to 226,000. The year of 1946 was the first year of the big push to overcome the drastic postwar housing shortage. The Wyatt

program of stimulation of construction and building-material production resulted in nearly 800,000 dwelling units started, of which 663,000 were new, privately financed, permanent dwellings, a level comparable to the 1941 residential activity. At the same time, there was a substantial increase in commercial building. The demand far outran the supply of building materials, with the result that building costs skyrocketed and the completion of projects was greatly retarded. Only 438,000 dwelling units of permanent types were actually completed during the year. With demand for all types of buildings far from satisfied, there was general agreement that the greatest building boom in history was just getting under way.

The early months of 1947 brought a retardation of building activity, which was a direct result of the rapid rise in construction costs following the removal of wartime price restrictions in November, 1946. Building-material prices rose to 175 per cent of the prewar level, and house construction costs had increased to an even greater extent. Building projects of all kinds were postponed in the hope of later readjustments in costs. For the first three months of 1947, the volume of residential accommodations started was somewhat below the same period for 1946. As the year progressed, the rate of new building was accelerated, so that 1947 ended well ahead of 1946. The increase in completions over 1946 was proportionately greater than the increase in housing starts; completions for 1947 numbered 835,000.

CHAPTER 7

THE BUILDING PROCESS

This chapter deals with the processes of creating usable urban space. The general economic characteristics and significance of the construction industry have been presented in the previous chapter. We now turn to the mechanics of the industry, to a consideration of the functionaries who man the industry and to the several steps involved in the preparation of the space-commodity which is traded in the urban land market.

LAND DEVELOPMENT

Land Subdividing in the Production Process

Cities grow both extensively and intensively. The greatest increase in urban facilities comes about through the outward thrust of the community and the absorption of agricultural land. But within the community, growth may occur by a process of replacement of existing structures with buildings that provide greater utility. Thus, single-family houses may be succeeded by apartments and retail store buildings by skyscrapers. At this point our concern is with the process of site production incident to extensive growth, reserving the subject of succession and replacement for later consideration.

Site preparation, popularly referred to as "subdividing" or "platting," is the first step in the involved process of creating the utilities of improved urban real estate. Those persons who remember the land booms of the past are often inclined to associate subdividing with staked out, unimproved farm land, flaunting signboards and banners, and high-pressure selling tactics. But these manifestations are less characteristic of the present than of the past and tend to obscure the important functions of the producer of building sites. The emphasis upon marketing distracts attention from the prerequisite steps in the process, steps that are necessary to all production—planning, risk taking, financing, designing, assembly of raw materials, and physical conversion or processing. Subdividing

is city building; this fact implies a social obligation on the land developer to produce building sites that are properly integrated with the existing city structure and provide the maximum of utilities and amenities. Once a few lots in any subdivision have been put to use, the entire plot crystallizes, resists revision in plan, and is not readily subject to the correction of mistakes and deficiencies.

Building lots, which are the product of subdividing, are in the nature of semifinished producers' goods or partially processed raw materials intended for combination with a structure to create the finished commodity ready for use. The lots are typically produced in quantity, from ten or less to several hundred in one operation. In any one subdivision the lots may be substantially uniform in dimension, but there are wide variations in lot sizes and proportions among subdivisions. The lots may be sold to users or speculators at various stages of processing, ranging from raw land, which has simply been surveyed and staked out into units of ownership, to fully improved land with all streets and utilities installed and paid for.

Not only are the products of land development varied in nature, but also the producers are diversified in organization, experience, skill and financial capacity. The land developer may be an amateur with raw land to unload. Some operations are carried out as a sideline by a group of investors organized in a syndicate. Such a group may contain persons who are engaged in some aspect of the real estate business and who manage the project. In other cases a syndicate manager is hired. The best type of land preparation is likely to come from large real estate development companies, which regularly engage in land development and often in building operations. Such organizations are experienced, able to provide the various professional services that are required, amply financed, and often have trained sales staffs. Particularly in the large urban areas, land development is being conducted with increasing frequency as a part of an integrated large-scale construction operation, under a single plan by one concern, and carrying the house-building process from raw land to completed home. While this type of operation is growing in importance, it constitutes only a small proportion of the total new subdivision activity.

The speculative nature of past subdividing activity has created serious social and economic problems. Our cities have been ringed with miles of prematurely developed land, much of it badly planned, inadequately served with utilities, and irrationally integrated with the existing community. Some of the aspects of the land markets of the past are discussed in a later chapter. In this chapter we are primarily concerned with the processes of land development. There is some hope that we

may escape the excesses of past land booms and that, in the future, our cities will extend themselves outward in a much more orderly and rational manner. In contrast to the last speculative subdividing boom, the majority of present land development is being done on a relatively sound basis by competent operators. Existing controls on subdividing are having a salutary effect.

The Process of Land Development

The logical first step in land development is an analysis of the market. In practice the interpretation of the market is often a perfunctory process, based on judgment and opinion rather than statistical evidence. The prime test is usually the current salability of building lots. This is not a dependable test at the beginning of a cycle, when demand has been accumulating but is only beginning to be felt, or at the peak of activity, when the basic land needs have been satisfied but the influence of speculative buying may impart a deceptive momentum to the volume of transactions.

Having decided that attractive profit possibilities exist in the land market, the subdivider proceeds to purchase raw land, usually in agricultural use, which is located most suitably to provide building sites for the segment of the market that he plans to serve. In selecting the land for platting he must consider the various subdivision controls that may limit the nature of the development; the size of the parcel relative to market requirements for finished lots; the proximity of existing utility lines and the probable costs of utility installations; the convenience of the location to schools, shops, and community facilities; the character of surrounding development and its influence on the marketability of the lots; the competing offerings of lots in the market; the original price of the raw land; the total costs of improvements and marketing; the probable length of time required to dispose of the lots; and the price at which the lots can be sold. When the land-development and house-building functions are integrated and conducted by a single organization, the process of land selection is little different with respect to fundamental considerations. However, the market factors to be given greatest weight are those which influence the price and salability of finished homes rather than building sites.

Land Planning. One of the first and most important steps in the processing of raw land is planning the utilization of space. As in the design of a machine, the functional efficiency of the area is determined by the arrangement of the integral parts. As a projected division of the larger urban structure, the new unit, in plan and function, must be coordinate with the other elements that make up the community. The

decisions of the developer with respect to the street pattern, lot sizes and shapes, proportioning of land among residential, commercial, and public uses will establish the quality of the building sites produced and will affect land values both within the subdivision and in the neighboring areas.

The planning of new subdivisions is a highly important matter from both a social and a commercial viewpoint. Poor planning can produce a form of city growth that leads to suburban slums or extends and perpetuates the evils of congestion, traffic hazards, confusion, and ugliness. Poor planning in the case of an individual subdivision may place it in an unfavorable competitive position and lead to financial disaster. If our cities are to keep pace with the changing needs of society, the planning of outlying areas must look ahead to better ways of life and not backward to archaic and inefficient land use arrangements.

Intelligent, scientific land planning has not been characteristic of much of past subdividing. The gridiron pattern has predominated, and because lots were produced for sale rather than for use, little weight has been given the ultimate integration of the new area with the surrounding community. Since lots were purchased in large measure by speculators rather than by families desiring a home site, it was sufficient that developers produce a salable article; there was no concern about the future of the subdivision and the unpleasant living conditions that poor planning might bring about. Other outgrowths of shortsightedness and the urge for quick profit were the excessive land set aside for commercial use and the lack of adequate provision for recreational and public areas. A premium could be secured for lots reserved for shopping districts and business use, while playgrounds and parks were a dead loss to the promoters. Small lots, often with only 20 feet of frontage, and narrow streets were thought necessary to yield a maximum profit, though it can be demonstrated that more enlightened planning involving longer blocks, wider streets, and more generous lot sizes can be equally profitable.

The art of subdivision design has advanced rapidly since the prewar depression and in application has been widely extended. For this progress the Federal Housing Administration has been largely responsible through enforcing minimum standards by withholding approval of loans on houses in subdivisions not meeting requirements. In this policy, FHA has been imitated by many progressive mortgage-lending institutions. Technical aid has been given subdividers in platting new areas and in replanning existing developments. Encouragement of sound planning has also resulted from the growing enlightenment of lot buyers who buy for their own use or for building houses for sale. In either case, the buyers are increasingly recognizing that the amenities of the

site have economic value and are to be preserved. Thus, though marketability is now, as always, the prime objective of the developer, he must design his product with a view to the long-term considerations that guide the purchase of home sites by user families or by operative builders.

Excessive allotment of land for commercial use is now relatively infrequent in subdivision practice. In many cities the area already reserved for such use far exceeds the requirements for years to come and the promise of speculative increase is absent. In some cases, of course, provision must be made for shopping districts to serve the householders in the neighborhood. Careful analysis will provide an estimate of the potential market, and the size of the commercial area should be appropriate to the need.

Home buyers and lending institutions have become conscious of the desirability of parks, playgrounds, and school sites and of the influence of these facilities in creating and preserving the amenities of the neighborhood. To ensure salability developers generally provide these public areas to meet the requirements of buyers and the standards of lenders.¹

The design of industrial subdivisions presents a set of problems quite different from those we have been discussing. Flat ground with railroad facilities is appropriate to this type of use, and the area is generally subdivided into large lots suitable for combining into tracts of various sizes.

Social Controls. There are several types of social controls which may affect the land planning of a subdivision. Zoning regulations may control the nature of the land uses, the minimum dimensions and area of the lots, the setback and side and rear yard lines. In most jurisdictions there are regulations governing street width, grades, angle of intersection, and other engineering features. Other laws may call for final approval of the plot by city, county, or state to assure proper integration with the existing road, street, and utility systems and to assure that all legal requirements have been met. Other laws regulate the public recording of plots in the interests of orderly marketing and sound titles and prohibit the sale of lots that have not been recorded according to the specifications of the statute. A further set of regulations is designed to prevent fraud and misrepresentation; these "blue sky" laws call for full disclosure in the sale of subdivision lands and are aimed at assuring that the seller can give clear title. Finally, to assure sound financing of land develop-

¹ For a more complete discussion of guiding principles for subdivision planning see: "Planning Neighborhoods for Small Houses," *FHA, Technical Bulletin* 5, 1936; "Planning Profitable Neighborhoods," *FHA, Technical Bulletin* 7; *Land Subdivision*, American Society of Civil Engineers, *Manuals of Engineering Practice*—no. 16, New York, 1939.

ment, some jurisdictions require that all improvements shall be installed and paid for by the land developer before the lots can be sold.²

Private Restrictions. In many cases, particularly when the land is not zoned, the developer may impose rigid restrictions on use and occupancy through the medium of restrictive covenants that become a part of the deed for each lot in the subdivision. The purpose of such covenants is to establish definitely the character of the development and to provide assurance to property owners that such character will be preserved.

Deed restrictions generally specify the type of structure that may be erected on each lot, indicate the building lines, impose limitations on resubdivision of lots, prohibit nuisances, restrict occupancy by certain races, control outbuildings and temporary structures, establish a minimum size and construction cost for dwellings, and may require approval of the architectural design of buildings by a committee of property owners. The covenants run with the land and are binding upon subsequent owners. It is common practice to provide for a date of termination of the restrictions or for some method whereby they may be amended or extended. Violations of the restrictions may be enjoined by court order, or the violator may be sued for damages. Under some circumstances, violation may result in the reversion of title to the original grantor.³

Restrictions are as important as land planning in determining the character of a subdivision, so that it is equally important that they be drawn in light of the character of the surrounding districts. Irrational restrictions may lead to development of nonconforming contiguous neighborhoods, an area with a high building-cost minimum side by side with a working-class district with a low minimum or none at all. This condition is characteristic of Detroit, where no zoning ordinance was in effect until recent years. It has created island neighborhoods of high grade surrounded by low-rent districts. In some cases, the result is to choke off the development of the areas of high restrictions and to leave vacant subdivisions in the midst of built-up districts of working-class housing.

Installation of Improvements. The physical changes that the developer makes in the raw acreage to prepare it for sale are generally termed "improvements." These changes are in the nature of installing accessories, which become physically and legally attached to the land. In some cases, the contour of the surface is altered by grading to facilitate

² For a further discussion of subdivision controls see Chap. 14.

³ For a suggested set of restrictive covenants see *Land Subdivision*, American Society of Civil Engineers, p. 23.

utilization of steep natural grades for streets and home sites or to fill in low spots that are not adequately drained.

Improvements may include streets, curbs and gutters; sidewalks; sanitary sewers; storm sewers; street lights; water mains; gas mains; electric lines; seeding and planting of parking strips; and development of playgrounds and parks. These improvements may be installed in various combinations. In some cases only streets are cut through, graded, and graveled. At the other extreme, the full complement of utilities is installed by the developer. In past eras, when cities looked forward to rapid growth, it was a relatively easy matter for the developer to induce the municipality to install streets, curbs and gutters, sewers, water mains, and sidewalks and to bond itself for these purposes. The costs were assessed against the lots on a front-foot basis, to be paid off by the owners over a period of years. Because of the failure of developers to dispose of the property and because of the vanishing hopes of speculative lot purchasers, these special assessments remained unpaid to a large extent, and there were widespread defaults of special-assessment bonds. This experience has induced a cautious policy on the part of cities, and officials now require a demonstration of need and an assurance of repayment before approving the extension of utilities. Some cities require that the basic utilities shall be installed and paid for before lots can be sold. In areas that are partially built up or promise rapid development, gas and electric utilities generally extend their services to new customers without charge. In more open territory, the developer may be required to post a guaranty, or the cost of extending lines may be charged directly against the consumer.

Partial improvement of subdivisions may throw additional burdens upon the home owner, which he does not anticipate at the time he purchases the lot and which the developer tries to minimize in the course of his sales argument. Unsurfaced streets are often satisfactory when houses are scattered and traffic is light, but in time a permanent pavement may be required and the owners of abutting property will bear the cost. In areas not served by water and sewer mains, fairly satisfactory substitutes are available in the form of private wells and pumps to supply water and individual septic-tank and distribution systems to carry off wastes. The initial costs of these expedients are often as great as the cost of public installations, and the quality of service is inferior. Furthermore, as the area builds up, a point may be reached at which the density of population creates a danger of contaminating the water supply and necessitates either a public sewer system or water connections or both. The costs are levied against the property owners, and those with private systems must therefore pay for duplicate facilities.

Items such as curbs and gutters, storm sewers, and sidewalks are often omitted from among the original improvements but must be eventually installed at the expense of the owners. It is apparent from the examples given that the initial price of the building site may not nearly represent the ultimate land cost to the property owner.

The cost of fully improving acreage for residential use may run to several times the cost of the raw land, with the ratio depending on acreage prices and local costs for labor and materials. Even the cost of minimum improvements of street, sewer, and water are likely to be more than equal to the land cost per platted lot in low-priced areas. The high cost of utilities is in part responsible for the insanitary situations that exist in working-class subdivisions. It is also largely responsible for the small lots often platted, for the cost of utilities is assessed on a front-foot basis; thus the greater the frontage the higher the levy. It also reduces the desirability of corner lots, since they may be subject to assessment for utilities installed on both streets. In one illustrative case, it was estimated that to decrease lot widths from 40 to 30 feet would save 22 per cent of the total land and improvement costs per lot.⁴

Improvement costs per lot are affected by other features of the land plan of the development, such as street widths, block lengths, and lot depths. Streets 40 feet in width instead of 50 feet would save \$50 per lot in the illustrative case. By doubling the block length of 600 feet, thus reducing the number of cross streets, 8.5 per cent of the cost of land and improvements could be saved. If the end streets have no fronting lots, the saving in reducing lot depths from 125 feet to 100 feet would be 9.4 per cent.⁵

Variations of the traditional gridiron scheme of planning have been developed that increase the living amenities of the building sites without increasing the cost per lot. One such scheme involves the use of a superblock with an interior park. Modern land planning has moved in the direction of longer blocks and curving streets following the contours of the land, thus effecting variety in lot size and shape and in the orientation of building sites. Through traffic is discouraged by dead-end streets and cul-de-sacs and traffic speeds are reduced by substituting curves for straight runs.

Financing. It has been the history of subdividing activity that many of the operations were unsoundly financed. Shoestring financing has often resulted in loss to the seller of the acreage, to the subdivider, and to the lot purchaser. Insufficient capital to carry projects to a successful

⁴ *Ibid.*, p. 33.

⁵ *Ibid.*, pp. 31 and 32.

conclusion has resulted in the return of the raw land to its original owner partially improved and with a few lots sold off, a failure as a subdivision and spoiled for agricultural use. The subdivider without sound financing has often faced bankruptcy and loss of whatever capital he has invested in the project, and the lot buyers are often unable to secure clear title.

Some of the devices employed in the financing of subdivision operations will be outlined. One scheme is an agency arrangement between the developer and the owner of the acreage, whereby the developer installs the improvements and receives a commission from the sale of the lots sufficient to recover his investment in improvements and to pay for his services as sales agent. Under another plan, the subdivider takes an option on the land, expecting to make improvements and to secure enough return from the sale of lots to take up the option and pay for the acreage, to cover his expenses, and to yield a profit. In case the proceeds from lot sales are not sufficient to pay for the raw land, the subdivider cannot convey title to the lots, and the purchasers have only a worthless claim against him.

When the subdivider has sufficient funds to make a down payment on the acreage, he may secure title if the payment is substantial, with the seller taking back a purchase-money mortgage for the balance due. In case of small down payments, the seller will give a contract for deed, agreeing to convey title after the unpaid balance has been reduced by a series of payments to a point where he feels safe in taking back a mortgage on the property to secure the remainder. Sometimes full payment must be completed before title is conveyed. In the case of the purchase-money mortgage, the mortgage collateral consists of all land not sold by the subdivider. Under this arrangement, as well as when the acreage is sold under land contract, when a lot is sold for cash, title for that lot is conveyed to the subdivider upon payment of a sum usually something in excess of the lot's share of the total indebtedness.⁶ The subdivider is then in position to give clear title to the lot buyer. When the lot is sold on contract for a small down payment with monthly payments on the balance spread over a number of years, there is potential danger in the possibility that the developer will divert the payments to other purposes, so that when the final payment has been made by the lot buyer, the seller will be unable to produce sufficient cash to release the lot and convey title.

When the owner of the acreage finances the sale by taking back a

⁶ A variation of this plan, known as a "subdivision trust," has been widely used in California. It involves the services of a bank or trust company as trustee, holding legal title, and collecting and disbursing all moneys in accordance with the trust agreement.

mortgage or selling under land contract, the unpaid balance may be handled by serial payments in cash or in the form of discounted mortgages or land contracts given by lot purchasers. Capital for the purchase and improvement of raw acreage can rarely be secured from the established financial institutions such as banks, life insurance companies, or building and loan associations because of the speculative nature of the investment. Short-term borrowing for the extension of well-established developments is sometimes possible on the pledge of unsold land or of contracts and mortgages given by lot purchasers.

In the past it has been customary to finance subdivisions through bond issues secured by a mortgage on the property. Such bonds are the obligations of a corporation formed to take title to the property and are generally marketed through some local mortgage company. The officers of the corporation often endorse the mortgage as individuals in order to make the securities more acceptable. Bonds secured by a development that has demonstrated its soundness by the ready sale of lots can be more readily disposed of than when the security is a new, untried subdivision. In the case of an established area, the contracts of lot purchasers can be used as supplementary collateral.

Funds for the extension of subdivisions or for the opening of new developments by the same promoters may be secured by the sale of contracts of mortgages given by lot purchasers. In the past, paper of this kind was sold at heavy discounts up to 25 or 30 per cent to individuals or to companies established to purchase such paper. This scheme has fallen into disrepute following the almost universal failure of these companies during the depression.

The syndicate device has been frequently employed in land-development schemes. Funds for land purchase and improvement are secured from the contributions of the syndicate members and profits are divided in proportion to the contribution. The syndicate manager receives a fee or commission for his services. This device has some advantages over the corporate form of organization in its simplicity, flexibility, and in the lesser degree of governmental control.

Other financing schemes occasionally used involve stock issues, the sale of notes to the public sometimes linked with a profit-sharing arrangement, or the sale of unimproved lots with a common stock bonus or with a repurchase agreement. In general, it may be said with respect to subdivision financing that the speculative character of the projects has forced a resort to schemes of financing that provide the investor with opportunities for sharing in the large profits anticipated by the promoters. In the present nonspeculative market, institutional or public

participation in subdivision financing is rare, and new developments are, for the most part, conservatively financed out of private funds.

Commercial and Apartment Sites. We have been discussing the processing of raw land in preparation for its use for building purposes—the transition from productive agricultural use to potential productivity as a producer's good to be combined with a building for urban use. By far the greatest proportion of new lots are designed and destined for residential occupancy. Small portions are set aside for commercial use and for multifamily dwellings. A majority of the store buildings in outlying areas are erected on vacant land, and many apartment buildings, particularly of the modern garden type, are built upon open sites. But within the built-up regions of the city, the development of building sites for store buildings and multifamily structures involves an entirely different procedure, which is external to the site and produces no physical change in the land itself.

Locations for many stores and apartments are secured by demolishing an existing structure in preparation for the new use. This sequence or succession of uses is a phenomenon of city growth and of functional changes that bring about internal structural shifts. Thus building sites for the new uses are not prepared by the active agency of man, but by a ripening process in the environment, which, in time, creates a situation appropriate for a change in the utilization of the location. This topic will be more fully considered in a later chapter dealing with city growth and structure.

Conclusions on Land Development. From neither a social nor a commercial viewpoint can the system of land preparation be deemed satisfactory. The profits of the land developer are uncertain and precarious. The tradition of large speculative profits is a chimera that draws in many amateurs, but the record of experience would indicate that losses far exceed entrepreneurial gains. A primary risk is the uncertainty of the holding period. The fixed costs of the ownership of an improved subdivision are relatively high; and unless the building lots are sold off promptly, the accumulation of taxes and interest costs will reduce and finally wipe out the profit margin.

The historical irregularity of subdividing activity is testimony to the nature of the process. The enterprisers are a mixture of nonprofessionals and experienced land developers. The typical motivation is the hope of large profits, with a sense of social responsibility for sound community development often absent. The planning unit is small, a fact that ensures a disparate and heterogeneous nature of peripheral development. The process is only loosely integrated with the remaining steps in the total construction sequence, with the result that there are costly time

lags and inconsistencies in design of land pattern and structures. The small-scale, poorly financed, and amateurish land-development enterprises that prevail cannot hope to produce a high-quality product, attuned to the market needs and consonant with the basic ecological pattern of the community. Social controls over subdividing are very helpful where they are comprehensive and adequately enforced; but controls are weakest in the urban penumbra, beyond the city limits, where new growth is occurring. At best, subdivision controls are restrictive rather than positive.

What hope can be found in this picture lies in the incentives and aids to good planning that are offered by lending institutions and the FHA. Another bright spot is the spread of large-scale building operations, where sound land planning and integrated land development have proved to be good business.

PRODUCTION OF STRUCTURES

Nature of the Construction Operation

We have treated of the preparation of land for introduction into the final process of production, and we are now ready to turn our attention to the structural element, its nature, and its fabrication. In point of time, the building operation is secondary, for it must wait upon the preparation of the site. In importance, however, it is equal, for land lies sterile without the buildings that translate area and location into valuable attributes.

In discussing building production, our focus will be upon the organizational aspects of the final fabrication. We shall be interested in the agencies involved in the final manufacturing stage, and in their relationships. We shall be looking at the process of bringing urban land into use by building upon it, and at those characteristics of this operation which affect the costs of production.

The construction of a building is a complicated procedure of assembling raw materials and semiprocessed parts to produce a semipermanent, rigid, immobile article, difficult to disassemble or to alter. It is a manufacturing process involving all the usual elements and requiring the performance of the customary functions. Capital is required, both capital invested in plant and equipment and working capital to finance production. There must be management to plan, to coordinate the several functionaries, and to organize the procedure of fabrication. The product must be designed in exact detail. Raw materials and semiprocessed ingredients must be purchased and stored; labor must be hired. But this

parallel cannot be carried too far, for there soon appear a number of differences between the typical industrial operation and the process of erecting a building. For example, in building, fabrication typically takes place at the site where the building is to remain and to be used. Thus the multitudinous operations, materials, and skills must be brought to the product rather than the product passing from step to step within a factory building. The product rather than the processes is fixed in space.

Another difference lies in the lack of product standardization that characterizes construction in contrast to the typical industry. With some exceptions, each building is unique in design and must be custom-built; rather than having been designed by the producing organization, the structure is often built under contract in accordance with plans and specifications created by a separate agency. The subcontracting of many of the essential operations is customary, though this feature is not uncommon in other industries. The builder typically has no permanent labor force, or only a small nucleus of workers; additional men are hired when needed on a particular job. The capital investment in equipment is small and what there is of machinery must be shifted from job to job. The workers generally provide their own tools. Raw materials and parts are rarely purchased in advance of need, are bought only in quantities required for the work in process, and are stored temporarily on the site of the building operation.

The predominant type of building organization is small, often a one-man outfit, with little capital, limited technical skill, and no inclination, time, or money to conduct research in methods and materials. The widespread use of the contract system means a precarious existence for many of the small, underfinanced builders; it divides up the available work so that the individual volume of production is low; it creates a disinclination to employ untried and unfamiliar methods and materials because of the difficulty of estimating costs.

All types of construction are not properly lumped into one category. We shall find that most of the general characteristics of the production operation that have already been outlined will apply most accurately to house building; and that for other types of construction, involving large buildings and public works, the process more nearly approaches the usual industrial operation. The contracting companies are larger, more efficient, better financed, and modern in organization and methods.

The Design Function

An examination of the several organizations and functionaries who participate in the erection of buildings will also serve to describe the

sequence of operations involved in the process and to point to some of the disabilities of the industry.

The first step in any manufacturing process is the designing of the product and the specifying of the materials of which it is to be constructed. The architect performs these functions in the building field. In his true capacity, he is the master builder; he must be skilled in the art of building in all its phases.

Under the contract system of construction, the architect is hired by the owner and serves him with professional advice. The first task is to study the requirements of the owner or the ultimate user of the structure and to understand fully the functions that the building is to perform. In the design of a manufacturing plant this requirement may call for a thorough knowledge of particular industrial operations. Design involves space planning, engineering design, and aesthetics. Space planning includes site planning—the disposition of the structure on the land—and interior planning—the distribution of the space within the building; engineering design relates to the structural features of the building, the floor and wall construction, roof framing, stairways, footings, and other features that determine the structural strength of the building. From an aesthetic standpoint, the architect endeavors to impart a pleasing appearance to the structure through the arrangement of masses and proportions and the selection of materials and architectural details.

The second major function of the architect is to prepare detailed specifications of the materials of construction. He usually does not determine the exact quantities to be used, but he designates the quality and grade of each material and each item of equipment and frequently specifies the exact brand or model number. A final function that the architect stands ready to perform for an additional fee is the supervision of construction in behalf of the owner. In this capacity his primary duty is to protect the owner from faulty workmanship, substitution of inferior materials, and deviations from the architect's plans.

In planning and in the selection of materials, the architect faces the difficult task of reconciling the objectives of beauty and efficiency with the requirement of economy. Architectural attractiveness is highly desirable; efficiency in terms of maximum utility, durability, and low upkeep are sought; and, other things being equal, the lower the cost of construction, the more economically sound the investment.

The services of a professional architect are not directly employed in a predominant proportion of the building operations. In the erection of large structures, apartment houses, office buildings, and public works, an architect is customarily retained. But in house building, which accounts for so large a share of construction, the architect has not been active.

It is doubtful that an architect's services are directly employed on more than 20 to 25 per cent of all dwellings built. It is true that the basic architectural functions must be performed by someone—design, specification of materials, and supervision. But many owners secure stock house plans with outline specifications from plan books, often prepared by architects for distribution by lumber companies and material dealers. The contractor improvises in the selection of materials as he proceeds in construction, and the owner, ignorant of the technicalities of building, is at his mercy in matters of quality. Speculative builders secure plans from similar sources and sometimes retain an architect to design salable houses. With a few tested plans on hand, the speculative builder proceeds to repeat the houses as long as they will sell, from time to time introducing variations in materials or details in accordance with his own artistic tastes. A few large house-building organizations include a permanent architectural staff to design houses to be built for sale and to work out alterations in standard plans to suit customers who buy from plans or model houses; custom-built designs may be prepared for the more individualistic prospects.

Until recent years, architects have made little contribution to progress in the field of house design and construction. On the contrary, their work in commercial and industrial construction has been in tune with the times. The skyscraper represents a modern form that reflects the functional requirements of commerce. The design of industrial buildings has evolved with the refinements of the machine age, but in residential architecture there has been a great reluctance to break with the past and a too fond clinging to the classical façades of dead eras. In part, this static view was a reflection of an architectural training that was preoccupied with aesthetics and classics, which stressed art at the expense of engineering, which was more concerned with appearance than with cost and efficiency. Furthermore, small-house architecture did not command the attention of the able and open-minded members of the profession, for there were higher fees and a greater challenge to be had in designing large buildings.

The depression of the thirties, tragic and costly in most of its manifestations, happily eventuated in a deepening interest in house design, enforced by the vanished opportunities in the nonresidential field. Functionalism, which gives primacy to space planning, is gradually displacing classicism, which works from the façade inward. There is a heightening interest in new forms, new materials, and new methods. We may now hope that the dead hand of the past is loosening its grip and that there may arise a contemporary house architecture that will truly reflect modern materials, modern methods, and the modern way of life.

With the spread of prefabrication and factory-built homes, the archi-

tect is beginning to function as an industrial designer. Some of the most progressive architects have given a great deal of attention to both the engineering and the design aspects of prefabrication, and no prefabricator is without architectural services. The growing recognition on the part of mortgage lenders, led by the FHA, of the importance of good design as a factor of mortgage risk, is having a salutary effect on residential architecture. Builders are finding that badly planned houses are not acceptable to lenders or are penalized for their deficiencies in design.

The Building Process

The manufacturer in the building operation is the general contractor or builder. He undertakes a contractual relationship with the owner in which he agrees to produce the structure in accordance with the plans and specifications drawn up by the architect. The builder deals with subcontractors, hires labor, buys materials and equipment, arranges temporary financing during construction, and acts as production manager in organizing, timing, and integrating the work of the many individuals, groups, and agencies who have a part in the operation.

Competitive Bidding. To secure the order for the job, the contractor generally must bid against other contractors. It is customary for the owner, in consultation with his architect, to select a number of builders who have demonstrated their dependability and who have done work of acceptable quality on structures of a nature similar to the one which is planned. The selected contractors are provided with plans and specifications and invited to submit bids.

The estimating of costs as a basis for bids is a difficult and wasteful process, particularly in the case of large structures. The builder can depend only in part upon his past experience with respect to costs of the several operations.⁷ Each structure has unique features, which may unpredictably affect costs. There are numerous contingencies that may arise to increase expenses. Unfavorable weather at certain times during construction may delay the work or require outlays for heating or for pumping water from the excavation. Labor trouble is costly, and an unexpected rise in wage rates or costs of materials may be disastrous if occurring after the contract has been signed. Unexpected and costly difficulty may arise from soil conditions not apparent until excavation is commenced. The multiplication of bids is wasteful. Each contractor or subcontractor who receives plans and specifications must painstakingly estimate the amounts of all materials required and price each separate item. The estimating of quantities is a time-consuming process, and,

⁷ The failure of most builders to keep accurate cost records of work done stands in the way of accurate estimating.

since all bidders will presumably arrive at the same quantity estimates on the basis of the same plans, it represents a costly duplication of effort. The English scheme of including estimates of quantities with the plans that are submitted for bids is more logical and more economical.

Few general contractors perform all the building operations with their own crews. It is customary to sublet the work covering such special processes as plumbing, wiring, sheet-metal work, tile setting, and others. The number of subcontracts varies considerably; the larger organizations may perform a large share of the work with their own crews, while the smaller outfits are likely to retain only the carpentry and concrete work. In the process of making his estimate for the total bid price, it is necessary for the builder to secure bids from subcontractors covering the functions that are to be let out. For each type of work, several bids may be requested. With several general contractors preparing estimates, the number of subcontractors is multiplied, though there will be some duplication.

It is a general experience that bids from different builders on the same set of plans and specifications will vary widely, sometimes as much as 25 to 30 per cent. This variation reflects the difficulty of estimating costs, the confidence of the bidder in his own estimates, and his anxiety to secure the contract. For large structures the discrepancy among bids is likely to be greater than for small houses, for all the difficulties and uncertainties of estimating are accentuated. When a contractor is anxious to get work, when his business is slack, at off-season periods or during lean years when he is anxious to keep his organization together, he is likely to bid more closely to his estimate of basic costs, and to reduce his profit margin and his allowance for contingencies.

The competitive bidding device is most frequently but not always used in the letting of contracts for construction. In case the owner has sufficient confidence in the efficiency and integrity of the builder, he may undertake a cost-plus arrangement, wherein he contracts to meet all costs for labor and materials and in addition to pay a fee to the builder for his services. This fee may be determined as a percentage of labor and material costs, or it may be a fixed amount. The fee varies but in many communities it is in the vicinity of 10 per cent, or about the same percentage as builders include in competitive bids to cover their services.

Functions of the General Contractor. Once the contract for construction is let, the successful bidder stands responsible to the owner and his representative, the architect, for the erection of the structure in accordance with the plans and specifications that are a part of the contract, and at the bid price accepted. In some cases, a time limit for the operation is set, with a money penalty for each day after the agreed date before

the building is ready for the owner's use. This provision is unusual in the case of dwellings, but often appears in contracts for business buildings and for apartment houses where it is important to be ready for the renting season. Another common provision in construction contracts covers the payment for changes in the original plans or specifications that are made at the instance of the owner and that change the cost.

In performing his function as production manager the contractor must organize and schedule the various operations. Some of the operations will be performed under his direct supervision by his own employees. Much of the work, however, will be done by subcontractors and their crews. The following subcontractors may participate in the construction of a single-family house; additional types will be found to function on large structures:⁸

Excavating	Sheet metal
Concreting	Tile setting
Masonry	Painting
Carpentering	Paper hanging
Plumbing	Floor finishing
Heating	Linoleum
Electrical	Landscaping
Plastering	

In house construction it is customary for the general contractor to do the concreting and carpentering with his own men. He may also assume responsibility for excavating, masonry, plastering, painting, or floor finishing. Only the larger organizations go beyond these functions.

From a legal viewpoint, the subcontractors stand in a contractual relationship with the general contractor and have no obligation directly to the owner. In the building operation they act as foremen over their own crews of craftsmen. The subcontractors are generally individuals, starting as craftsmen, with sufficient initiative and courage to rise from the ranks and to undertake the risks of competitive bidding. They need little or no equipment, virtually no capital, and may have no headquarters save their own homes. In some cases, such as in plumbing, heating, or electrical work, the subcontractor may operate as a material or equipment dealer. In general, subcontracts include the provision of materials and equipment, but at times the contract covers only labor.

Before starting a building job, the general contractor must arrange for workmen's liability insurance, secure a building permit, apply for the

⁸Temporary National Economic Committee Hearings, Part 11, Construction Industry (Washington, D.C.: U.S. Government Printing Office, 1940), Exhibit 870.

installation of various utilities, arrange for temporary water and electric service during the construction period, and make final arrangements with the subcontractors. He must arrange for payments to the subcontractors and must provide them with working drawings necessary to guide their operations. He must schedule the work of the various subcontractors and notify them in advance of the time when their work is to begin. He must check all work to see that it meets specifications. He must assure that all subcontractors have the necessary permits and must provide them with storage room for their materials and equipment.

Characteristics of Builders. For the most part, general contractors who specialize in house building are small operators, many of them former carpenter foremen who have accumulated the small capital required to enter the business. The ease with which this entry is effected is demonstrated by the increase in the number of contractors that accompanies every spurt in building activity. In hard times these men are satisfied to work at their trade in the crew of some more substantial concern, but with an increase in the number of building jobs they are likely to venture forth on their own in the hope of sharing in the promised profits. Considering the background and origins of the typical house contractor, it is easy to understand the frequency with which lack of technical skill characterizes his work. In large cities where the more progressive builders do a substantial volume of work, it is more common to find engineering ability and a wider use of modern methods and materials.

In 1938, it was reported that there were about 22,000 general building contractors, 8,000 general contractors engaged in other construction work, and 67,000 special trade or subcontractors. In addition, there were 8,000 unclassified contractors. These concerns employed a total of 826,000 workers. The predominance of small organizations is indicated by the fact that 22 per cent of the concerns had only one employee, 18 per cent had only 2 employees, and 13 per cent had only 3 employees. Of all the concerns, 70 per cent employed 5 persons or less.⁹

An indication of the small capital requirements of the contracting business is afforded by data on the average inventory value of equipment per employee in the contract construction industry. In the house-building industry, operative or speculative builders owned equipment valued at \$68 per employee on the average, while for general contractors specializing in residential work the figure was \$175. Contractors doing work in all building fields owned equipment of \$229 value per employee. In the field of heavy construction, the situation is quite different. The value of equipment per employee for concerns engaged in dredging, river, and harbor work was \$2,655, in levee work, \$3,263, in sewer, gas, and

⁹ *Ibid.*, p. 5504.

water conduit construction, \$807. For highway contractors, the figure was in the neighborhood of \$1,000.¹⁰

The construction industry is essentially local, particularly that part of it which engages in house building. Few of the small concerns operate beyond commuting distance to their home city. The contractors who undertake commercial and industrial building may extend their fields of operation to cover the home state or even a wider region. A relatively few large construction-engineering organizations have national scope. In 1935, among building contractors, 66 per cent of the work in terms of value was reported to have been performed in the home city, while 21 per cent was done in the home state outside of the home city. In the field of heavy construction 36 per cent of the work was performed in the home city, 29 per cent outside but in the home state, and 35 per cent outside of the state. Among the subcontractors, the home city accounted for 90 per cent of the work of carpenters and painters and between 80 and 90 per cent for roofing, sheet metal, heating, plumbing, masonry, and plastering.¹¹

Table 41 illustrates the small scale of operations that characterizes the house-building business. It will be noted that 63.8 per cent of all builders constructed only one house in 1938 and that the activity of this group accounted for 18.9 per cent of all construction. Builders of 10 houses or less constituted 93.9 per cent of the total and produced 51 per cent of the homes. A survey made in 1947 revealed some increase in the proportion contributed by the larger operators; builders of 10 or more houses accounted for three-fourths of all house construction.¹² The large-volume builders are found mainly in the big cities. It was reported that among the 28 cities having populations of 100,000 or more and covered in the Bureau of Labor Statistics survey on which the table is based, 4 cities did not have a builder who produced 10 or more houses per year and 13 were without a builder who constructed as many as 25 houses.

Coleman concludes that, in the prewar period, there were some 70,000 to 80,000 urban builders in the nation who produced one or more homes during a year. There is evidence that the more efficient building organizations tend to operate in the middle-price range, in prewar terms—\$3,000 to \$8,000. He reports that in the 37 largest apartment-producing cities in 1939, the average number of projects per builder was 2 and the number of dwelling units per builder was 48.¹³

¹⁰ *Ibid.*, p. 5505.

¹¹ *Ibid.*, p. 5506.

¹² *Architectural Forum*, November, 1947.

¹³ Coleman, Miles L., *American Housing* (New York: The Twentieth Century Fund, Inc., 1944), p. 77.

TABLE 41. CUMULATIVE PERCENTAGE DISTRIBUTION OF BUILDERS AND HOUSES IN 72 CITIES, 1938, BY SIZE OF BUILDER AND BY 1930 POPULATION OF CITY *

Size of city	Builders										
	Number of cities	1 house	2-4 houses	5-9 houses	10-14 houses	15-24 houses	25-49 houses	50-99 houses	100-149 houses	150-199 houses	200 or more houses
Total	72	63.8	86.1	93.9	96.7	98.3	99.3	99.8	99.9	100.0	100.0 †
500,000 or more † . .	13	62.2	83.0	91.6	95.2	97.4	98.9	99.6	99.9	299.9	100.0
100,000-500,000 . .	15	64.3	89.8	97.1	98.8	99.6	99.9	100.0			
50,000-100,000 . . .	11	65.3	91.2	98.1	99.1	99.5	99.9	100.0			
25,000-50,000	9	74.1	93.6	98.3	99.2	100.0					
10,000-25,000	11	72.8	95.2	98.1	98.8	99.3	100.0				
5,000-10,000	11	70.2	90.3	96.9	99.4	100.0					
1,000-5,000	2	65.4	92.5	100.0							
Size of city	Houses										
	Number of cities	1 house	2-4 houses	5-9 houses	10-14 houses	15-24 houses	25-49 houses	50-99 houses	100-149 houses	150-199 houses	200 or more houses
Total	72	18.9	36.1	51.0	60.4	69.3	79.5	88.8	94.5	96.8	100.0
500,000 or more † . .	13	14.8	27.9	41.4	51.3	61.0	73.1	85.0	92.6	95.7	100.0
100,000-500,000 . .	15	28.4	57.7	78.0	86.6	93.8	98.4	100.0			
50,000-100,000 . . .	11	29.7	60.7	80.3	85.5	93.8	96.7	100.0			
25,000-50,000	9	41.1	68.0	85.6	91.5	100.0					
10,000-25,000	11	39.7	70.3	80.7	84.8	89.5	100.0				
5,000-10,000	11	34.4	59.8	79.9	94.2	100.0					
1,000-5,000	2	36.1	77.3	100.0							

* *Builders of One-family Houses in 72 Cities*, Bureau of Labor Statistics, U.S. Department of Labor, Serial no. R1151 (Washington, D.C.: U.S. Government Printing Office, 1940), p. 4, Table 5.

† Washington, D.C., included in this group.

‡ Less than 1/10 of 1 per cent added.

NOTE: The data include only houses built within city limits and thus may understate volume in some cases. Many of the builders of only one house per year are owner-builders or subcontractors operating only occasionally as general contractors.

Contracting organizations in the building industry are typically weak financially, with little working capital and primary dependence on bank loans and book credit from materials dealers. Subcontractors carry the major share of the investment in capital equipment, particularly in the house-building industry, and supply a substantial proportion of total working-capital requirements. The rate of turnover in building organizations and the low rate of profits over the long run reflect the weaknesses of the industry in resources and organization.¹⁴

We have already referred to various types of general contractors, but it may be well to summarize the characteristics of the outstanding clas-

¹⁴ *Ibid.*, pp. 83-84.

sifications. There are wide variations in the size of concern in terms of volume of business. Some concerns specialize in one type of construction, while others engage in a number of types of work. No classification can be exact, but certain general categories may be found helpful. In the field of building are found the nonspecialized concerns, the contractors concentrating in commercial, industrial, or residential buildings, and the operative or speculative house builder. The first type, the nonspecialized contractor, is essentially a local concern, having a fairly large and well-equipped organization and operating primarily in the region of the home city though sometimes in other cities of the state or in near-by states. He prefers to bid on large structures—office buildings, hotels, apartments, factories, and large dwellings—but when this type of business falls off, he may enter the small-house field. Among the specialized contractors, there is the national organization that undertakes the construction of large commercial and public buildings. Some local contractors prefer to do only these types of building, but only in the largest cities is there a sufficient volume of business to permit such local specialization. A few organizations do only industrial structures, performing both the design and the construction functions. In general they operate on a national or regional basis.

Residential Builders. The greatest share of residential building is done by small concerns, which rarely undertake any other type of work except occasional small commercial buildings. It is quite common for these builders to engage in both contract and speculative or operative building. Building on order may come about through competitive bidding on plans and specifications presented by the owner, but in some cases, particularly among the large firms in metropolitan areas, the buyer may order from stock plans offered by the builder or from show houses erected by the builder as samples of his work. Some builders offer architectural services and will design and build dwellings on a custom basis.

Among the contract house builders there are those who do only a little speculative building or none at all. At the other extreme, there are concerns that are primarily speculative or operative builders and who do little or no work on contracts secured through competitive bidding. In the large cities will be found a number of large-scale operative builders whose annual volume may run to several hundred houses. It is customary for these organizations to purchase large tracts of land for development, in some cases in existing subdivisions and in other cases raw land, which they plat and prepare for use. Through good management, technical skill, and large-scale operation many economies are effected that permit the sale of the product at attractive prices. Savings are made by the wholesale purchase of land, the buying of materials and equipment in

quantity, special agreements with labor, and the standardization of the product. Standardization reduces the variety of materials and equipment required and facilitates purchasing in quantity, but perhaps the most important economy lies in the greater efficiency of the production process. In building a group of houses of similar design and materials, labor costs can be materially reduced by the greater man-hour productivity attained as the workers learn the repetitive operations.¹⁵ There is less need for studying blueprints and specifications and less supervision is required. The work of the various trades can be better integrated and total production time reduced. There is more opportunity for utilizing laborsaving machinery and for shop fabrication and pre-cutting of the standardized parts.¹⁶

It is noteworthy that the operative builder is more than a producer of houses. He is likewise a merchant selling at retail and is oftentimes a land subdivider and developer. To be successful he must be alert to market trends, to changes in the public taste, to the forces of competition from other builders and from other consumers' goods that may absorb the funds of his potential customers. The operative builder is an entrepreneur who must assume the risks of production in advance of sale. The nation has this type of enterpriser to thank for the stock of housing that shelters our urban population, for the greatest share of new house building has been his. But there can be little gratitude due him for the overcrowding of land that is the result of a mistaken notion of his own economic advantage, for the execrable architecture that blights the urban landscape, or for the shoddy construction that too often has been passed off on helplessly ignorant buyers.

In recent years there has been a marked improvement in the quality of the houses produced by speculative builders. The reason for this progress lies perhaps less in a growing sense of social responsibility of the builders than in the greater controls that are now imposed by public agencies and lending institutions and in a more discriminating public taste. There are more large-scale operators in the field who have learned some of the principles of merchandising and who appreciate the advantages of offering a good product. The enforcement of local building codes has

¹⁵ Estimates of laborsaving in large-scale building of standardized houses run as high as 20 to 30 per cent. Bohannon, a large-scale California operator, estimates a saving of 30 per cent in labor and materials costs as compared with building one house at a time. *Fortune*, vol. XXXIII, no. 4, p. 199, April, 1946.

¹⁶ For an analysis of the relationships between the number of units produced and the cost per unit for the various costs elements see the interpretive study on "Large Scale Housing," *Architectural Forum*, February, 1938, p. 110. See also National Resources Committee, "Land, Materials and Labor Costs," *Housing Monograph Series* no. 3 (Washington, D.C.: U.S. Government Printing Office, 1939), p. 75.

been more rigid and perhaps more honest. The widespread influence of the FHA has forced builders to meet FHA minimum construction standards and to submit to inspection during construction in order to qualify their houses for the popular FHA financing. The Federal Home Loan Bank System has exercised a strong influence among its member savings and loan associations in the direction of greater discrimination in the selection of mortgage collateral. In general, it may be said of mortgage lenders that, in spite of keen competition for mortgage loans, requirements with respect to design and quality of construction of structures presented as security are higher than ever before. Finally, the publicity material of the Federal housing agencies and educational articles in newspapers and magazines have raised the standards of public demand. Home buyers are more sophisticated and better informed.

Working Capital. The problem of working capital for financing production is a problem for house builders as it is for any manufacturer. It has long been a peculiarity of home building that the financing of the consumer in his home purchase often precedes the financing of the construction process; in fact, the availability of a construction loan to the producer often is conditioned upon arrangements for consumer financing. This situation is generally true in the case of custom-built homes and other homes built on order where the buyer lends his own credit for construction money. It has usually been true of the small operative builder with limited capital of his own who must have some of his product sold in advance and financed in order to secure working-capital loans. In fact, since there are few all-cash home buyers, the availability of consumer credit is the very foundation of the home-building industry.

A great advance in housebuilding finance came with Title VI FHA mortgage insurance, which permits the builder to become the mortgagor and to secure advances during construction on a mortgage to be taken over by the ultimate purchaser. This scheme, together with the 90 per cent loan under Title VI has eased the working-capital problem and has been an important stimulant to large-scale building operations.¹⁷

Building Materials

The manufacture of building materials is characterized by a concentration of productive capacity in a relatively few establishments. For example, in about two-thirds of the many lines of building products, more than 50 per cent of the total output is accounted for by the four leading manufacturers.¹⁸ The same characteristic applies to items that are pro-

¹⁷ For a good discussion of construction financing, see *Architectural Forum*, February, 1948, pp. 12-15.

¹⁸ Colean, *op. cit.*, p. 112.

duced locally. This semimonopolistic situation has been offered as an explanation of the relative rigidity of building-material prices, which show a tendency to fall less far in times of general price decline and to rise more precipitately during recovery than most other commodity prices.¹⁹

The pattern of material distribution in the construction industry is in part a reflection of the nature of the whole building process. The number of building jobs and the number of building organizations are very large, and thus the geographical spread of distribution is as great as for most consumer goods. The irregularity of production activity and the lack of working capital that characterizes so many of the builders have led to a complex pattern of distributive functions. The usual channel of distribution is from manufacturer to wholesaler or jobber to retailer to user (builder). Since the builder is in effect a manufacturer, the system is unique in that the house manufacturer buys from a retailer.²⁰

There is a wide variety of distributive arrangements for different types of material and equipment. Some manufacturers have set up their own distributing organizations; others depend wholly on jobbers and retailers. In some cases, manufacturers sell directly to retailers. The local lumber dealers, for example, handle a wide variety of building products, which are secured in part directly from national manufacturers, in part from wholesale distributors, and in part from local producers of brick and concrete materials.

In some cases, the materials are installed by the local dealers as subcontractors who bid in terms of materials in place. Products that are customarily handled in this manner include plumbing fixtures and supplies, sheet metal, tile, linoleum, heating equipment, and wiring. Large contracting organizations which work on nonresidential buildings develop direct channels to the producer for steel, concrete, brick, and other items.

The building-material dealer performs functions of storage, thus permitting contractors to operate without large stocks of semifinished items; he aids in financing new construction by advancing credit on building jobs; his close knowledge of market needs in the locality is a help to both builder and manufacturer; he advertises and promotes the products that he handles and often offers a plan service and technical advice to prospective home builders.

The cost of building-material distribution is said to be high. One estimate places the manufacturers' markup over production costs at 16 per cent, the wholesalers' markup at 23 per cent, and the retailers'

¹⁹ *Ibid.*, p. 111.

²⁰ *Ibid.*, p. 115.

markup at 40 per cent. In terms of the original production costs, this total markup is 100 per cent.²¹ The National Housing Agency estimate for a small house is that the costs of distribution plus transportation represents 17.8 per cent of the total price of house and lot. All materials delivered at the site represent 45.7 per cent of this total; of the site cost of materials, the costs of distribution account for 30.4 per cent and the costs of transportation for another 8.5 per cent.²²

In part, the costs of material distribution are costs of instability; for if the building industry were more constant in its level of activity and thus more predictable, the whole pattern of production and distribution could be simplified and rationalized. But to some extent, at least, the costs of building materials are inflated by artificial restraints. Price fixing on both a national and a local basis has been discovered from time to time. Bid rigging by dealer-subcontractors is indulged in upon occasion. Dealers and labor unions have been known to join in attempting to exclude new materials and new brands. And manufacturers have ways of closely maintaining an established distributive system which it is to their advantage to control. The investigations of the Department of Justice have revealed many trade restraints and have pointed the way to a reduction of building costs through the restoration of free competition in the building-material field.

Building Labor

The fabrication of structures is essentially a handicraft process. Except for the recent introduction of wallboards and the use of metals, particularly in large structures, the basic materials of construction have remained essentially unchanged for centuries. And so it is with the methods of fastening together the materials and with the basic skills required of human labor. The arts of carpentry, brick masonry, and plastering are ancient, though the skill of craftsmen has probably been declining since the Middle Ages.²³ Because of the large part that hand fitting and assembly play in the construction process, labor is one of the major factors in production, and labor management and labor costs are basic problems. In this section we shall be concerned primarily with site labor—that labor force which engages directly in the final fabrication of the structure. There are, of course, many workers employed in the initial processing of materials before delivery to the site and in the manu-

²¹ *Ibid.*, p. 117.

²² "Housing Costs," *National Housing Bulletin* 2, Appendix E.

²³ Bemis, A. F., "The Evolving House," *The Economics of Shelter*, vol. II (Cambridge, Mass.: The Technology Press, Massachusetts Institute of Technology, 1934), p. 250.

facture of equipment, but labor problems in those fields are of a different character and are more properly considered in connection with other industrial operations.

The relative importance of labor in terms of cost as compared with the cost of materials that go into a structure is subject to variation among various types of construction and in different localities. However, in residential construction the division of site costs seems to run from 35 to 45 per cent for labor and from 55 to 65 per cent for materials.²⁴ There is some evidence that the proportion of total cost assignable to labor has shown a tendency to decline in recent years by reason of an increasing use of laborsaving tools and machines and more extensive preprocessing and prefabrication of materials, parts, and equipment.²⁵ For nonresidential construction and multifamily residential structures, the proportion of labor cost may be higher because of greater economies in the purchase of materials and the higher proportion of skilled labor required. However, the data on labor-cost ratios in nonresidential construction are so generally contradictory that it is safe only to state that labor costs range from 25 to 50 per cent of total site costs.²⁶ The relatively high labor-cost ratio of the building industry is found to be matched by a number of other industries, wherein the operations are not well adapted to standardized, machine production and which depend upon handicraft skills. Some of those industries which, like the building industry, require a high proportion of skilled labor, are printing and publishing, stone, clay, and glass products, machinery, forest products, and railroad repair shops.²⁷

It was estimated that in 1927 there were about 2.5 million workers in

²⁴ See TNEC Hearings, *op. cit.*, p. 5262; Bemis, *op. cit.*, p. 270; *Architectural Forum*, February, 1938, p. 115.

The estimate of the National Housing Agency is that on a \$5,000 house, site labor accounts for 29.5 per cent of the total cost of house and land, and 25.5 per cent of the cost of construction only. *National Housing Bulletin* 2, p. 46, December, 1944.

Data prepared by the Bureau of Labor Statistics covering 1946 examples of house construction indicate that site wages were about one-third of construction costs. See Report of the Flanders Subcommittee to the Joint Committee on Housing, 80th Congress, 1st Session, p. 77, Table 35.

²⁵ TNEC Hearings, *op. cit.*, p. 5263.

²⁶ Some of the facts in evidence are as follows: For seven federal large-scale housing projects the labor-cost ratio ranged from 40.8 to 49.1 per cent and, for representative buildings in 13 cities, the range was from 26.0 to 43.1 per cent. The labor-cost ratio for the construction industry as a whole in 1929 was said to be 41.7 per cent. National Resources Committee, *op. cit.*, p. 79.

On non-Federal Public Works Administration projects in 1934 and 1935, the ratio for building construction was about 34 per cent. "P.W.A. and Industry," *Bulletin* 658, U.S. Department of Labor, p. 13, 1938.

²⁷ National Resources Committee, *op. cit.*, p. 79.

the building industry; an estimate for 1936 was 2.6 million, of which about one-half were not then employed at their trade.²⁸ During the depression years when building was slack, many of the craftsmen found their way into other lines of employment, some permanently, others who have been drawn back into construction work with the revival of activity. It is characteristic that, when building is booming, the ranks of the building workers are swelled by poorly trained and inexperienced men who shift from less lucrative occupations or who come to the cities from small towns and villages to enjoy the higher wage scale. A falling off of building reverses this movement.

During the peak of war construction activity, construction employment rose to nearly 3 million, but by the end of the war, this figure had dropped to little more than 1 million. The recovery after V-J Day was remarkable, for by August, 1946, the construction labor force had more than doubled. It was estimated at that time that some 36 per cent of the total number of workers in construction activity were engaged in residential building or repair and that the year 1947 would bring the totals to 950,000 workers in housing out of a total of 2.5 million.²⁹

Building labor is characterized by a high degree of specialization, which has been accentuated and crystallized by trade-union organization. The fabrication of buildings has been subdivided into numerous specialized functions, which, by reason of the special skills required, must each be performed by a separate trade. Some 50 trades and crafts employed in various types of construction are recognized. In the construction of a dwelling house some 20 trades may participate. In the building of a large city apartment structure, 30 to 35 trades may engage.³⁰ The multiplication of crafts is one important source of waste in construction. The functions of the various trades are interdependent and can be effectively synchronized and coordinated only under the most favorable conditions and under skillful management. The line of division between

²⁸ Estimate for 1927, Bemis, *op. cit.*, p. 198; for 1936, *Fortune*, June, 1937, p. 46.

²⁹ *The Journal of Housing*, vol. III, no. 10, p. 220, October, 1946.

³⁰ The following 34 trades might be found: Ornamental Iron Workers; Excavators; Painters, Paper Hangers, and Decorators; Rock Drillers; Carpet and Linoleum Layers; Building and Steel Iron Workers; Cement and Concrete Workers; Tile Layers; Tile Layers' Helpers; Mosaic and Terrazzo Workers; Elevator Constructors; Metal Polishers; Riggers and Machinery Movers; Plumbers and Gas Fitters; Asbestos Workers; Electrical Workers; Compressed-air Workers; Composition Roofers; Carpenters and Joiners; Operating Engineers; Metallic Lathers; Window Cleaners; Teamsters and Chauffeurs; Curtain, Drapery, and Venetian-blind Workers; Hod Carriers, Building and Common Laborers; Glaziers; Sheet-metal Workers; Decorative Art Glass Workers; Boilermakers and Helpers; Stonemasons; Plasterers; Plasterers' Helpers; Bricklayers; Bricklayers' Helpers. *Fortune*, June, 1938, p. 46.

crafts is not always clear cut and gives rise to disputes and frictions. Jurisdictional disputes will be considered more fully at a later point. Finally, the craft tradition in the building industry seriously hampers the introduction of new materials and methods. Craftsmen, and the many small contractors who have practiced or still practice a trade, resent the appearance of unfamiliar techniques, which have no precedent and which threaten the sovereignty of their crafts. Thus the wastefulness of hand methods is perpetuated.

Uncertainty of employment is the lot of the building worker. He is hired from job to job, never certain whether reemployment awaits him at the completion of his present work. The better craftsmen may be fortunate enough to be regular members of some general contractor's or subcontractor's crew, sure of work whenever the contractor has been successful in his bidding. But many workers have only casual employment, hired only for as long as they are needed on jobs that require the contractor to add to his regular crew. The building trades are on an hourly basis for the most part, subject to frequent and unpredictable layoff because of unfavorable weather conditions, delays in the delivery of materials, failure of other trades on the job to complete preparatory operations, or simply a falling off of construction activity.³¹ The well-known seasonal nature of construction activity results in extensive unemployment during the winter months.³² It has been said that employment for from 140 to 200 days out of the year is considered full time, while many of the building workers are fortunate to have as much as 125 days of work.³³ It must be recognized, of course, that regularity of employment varies with the rate of production in the industry.

Wage rates in the building trades cover a wide range. Variations are found among the several crafts, among cities of different size, and among regions of the country. In general, union wage scales are higher and more stable than nonunion scales. This difference in level is said to range from 10 to 40 per cent.³⁴ Wages are somewhat sensitive to changes in the demand for labor that accompany fluctuations in the rate of building. This sensitivity is more pronounced in the case of nonunion workers, but in slack times union members often accept wage reductions though the nominal union scale remains unchanged.

Few data are available relating to wage scales of nonunion workers.

³¹ In some cases of large-scale operations, labor is contracted for on a job basis, with a fixed amount paid for all labor put on a particular operation.

³² See the section on Cyclical Movements, Chap. 6.

³³ *Fortune*, June, 1938, p. 50. Another estimate puts the average time lost from 1897 to 1926 at 22 per cent. Bemis, *op. cit.*, p. 158, Table 27.

³⁴ TNEC Hearings, *op. cit.*, p. 5264.

In examining union rates recognition should be given to the fact that they are not representative of the wages paid to the large numbers of unorganized workers. It is also significant that these data probably are not representative of the smaller cities, where scales are typically lower than in the larger communities.

In December, 1946, the average hourly earnings on building construction projects was \$1.569 per hour, or an increase of 12.5 per cent over the average in December, 1945.³⁵ Wage rates reported from 75 cities as of Jan. 15, 1947, showed the following ranges for selected building trades, omitting New York:

Trade	Wage rates per hour*	
	High	Low
Bricklayers	\$2.250	\$1.625
Carpenters	2.000	1.300
Electricians.	2.250	1.375
Painters.	2.000	1.250
Plasterers.	2.250	1.500
Plumbers.	2.200	1.500
Building laborers.	1.375	.750

* U.S. Bureau of Labor Statistics, *Construction*, February, 1947, p. 43, Table 33.

The postwar readjustment in wage rates has not been so violent as after the First World War, when construction wage rates jumped 35 per cent. The rise in the wage level between 1921 and 1940 was 42.4 per cent, with three-quarters of that increase having occurred before 1930.³⁶ As the postwar building boom develops, further wage increases are to be expected.

There is a definite relationship between the size of the city and the level of wages in the building trades. This fact is illustrated in Table 42. These data also reflect a wide variation in wages among cities in the same size groups. The extreme range between the lowest city average of \$.794 and the highest, \$1.536, is indicative of the great differences in local conditions and suggests that generalizations on the level of building wages are dangerous. However, the generalization to the effect that for

³⁵ U.S. Bureau of Labor Statistics, *Construction*, February, 1947, p. 41, Table 31.

³⁶ U.S. Bureau of Labor Statistics, *Handbook of Labor Statistics*, 1941 ed., vol. I, p. 252.

TABLE 42. AVERAGE UNION HOURLY WAGE RATES AND RANGE OF RATES IN THE BUILDING TRADES BY SIZE OF CITY, MAY 15, 1937 *

Size of city (population)	Number of cities	Average wage	Range
Over 1,000,000 . . .	5	\$1.432	\$1.156-\$1.536
500,000-1,000,000	8	1.339	1.179- 1.498
250,000-500,000 .	21	1.314	1.030- 1.579
100,000-250,000 .	25	1.192	0.912- 1.412
40,000-100,000 . . .	9	1.160	0.794- 1.472

* "Union Scales of Wages and Hours in the Building Trades in 70 Cities," *Bulletin* 657, U S. Department of Labor, p. 24, Table 7, May 15, 1937.

cities of the same size groups, the level of wages is higher in the North and West than in the South can be supported by facts.

Union hours show much more consistency than union wages. Over 80 per cent of all the building trades were working under a scale of 40 hours per week in 1937, 8 per cent were on a 35-hour basis, and 7.5 per cent worked 30 hours per week.³⁷

Because of the uncertainties of employment in the building trades, the annual earnings of workers are not so high as their wage scales might imply. Full employment is unusual. On the basis of a number of estimates of the incomes of building workers, it appears that the prewar range was from \$1,000 to \$2,000. Even during periods of active building, only a small proportion of workers exceeds this income, while many of the unskilled laborers fall below \$1,000. In slack times, earnings fall sharply as a result of unemployment and reduced hourly wages.³⁸ In prosperous times, there is much overtime work at premium wages and some labor pirating by means of bonus arrangements and promises of overtime.

A number of proposals have been made for guaranteeing to building labor some minimum annual income in return for a reduction in hourly wage rates. It is urged that labor will thereby be assured of an income in excess of present average earnings even at the higher wage rates and that the costs of construction will be reduced sufficiently to permit

³⁷ U.S. Department of Labor, *Bulletin* 657, p. 33.

³⁸ With higher hourly rates and full employment, the average weekly earnings for all classes of workers on private construction projects during the last half of 1946 ranged from \$55 to \$60. U.S. Bureau of Labor Statistics, *Construction*, February, 1947, p. 40, Table 31.

families of lower incomes to acquire new homes. This scheme is of doubtful practicability, mainly because of the lack of many building organizations sufficiently large to give the definite guaranty that labor would require. Unions have struggled long and hard to attain the present wage scales and are not likely to retreat without positive assurances. The difficulties of finding a workable device for establishing a financial guaranty are great. Finally, the plan is philosophically contradictory to a basic union tenet, *i.e.*, to spread the available work to as many men as possible. The guaranteed annual earnings scheme would tend to concentrate the benefits of available employment.

Many of the ills of the building industry have been laid at the door of the organized building-crafts unions. These groups are said to be responsible for unduly high wages, for costly strikes and jurisdictional disputes, for strangling working rules and limitations on output, for limiting the labor supply, for rackets, and for resistance to new methods and materials. Some of the accusations are supportable, some unjustifiable, and some simply irrelevant. In the first place, to place the matter in proper perspective, it is significant that in the prewar period only from 30 to 40 per cent of all building workers were organized, though this percentage is now larger. Unions are strongest in the large cities and do not control the labor market in many localities. In small towns they have limited influence. Union labor is ordinarily used on large construction jobs, but it was estimated that 90 per cent of all prewar small houses were nonunion jobs.³⁹ This proportion has changed radically in recent years; present estimates are that up to two-thirds of the house-building field is now unionized.

High building wages have been held responsible for the inability of the industry to provide new housing for the lower income groups among our population. But wage rates in the building trades are no higher than the rates for skilled trades in other industries, nor are annual earnings out of line. Furthermore, it has been a common practice for local building trades unions to arrange for a reduced wage scale for work on small houses. Finally, the proportion that the wage bill bears to the total cost of a house and lot to the consumer is such that only a drastic reduction in wage rates would effect a significant diminution of the price. For example, a 10 per cent reduction in wages would result in a 2 per cent decrease in the price of a medium-sized house.⁴⁰

Strikes and jurisdictional disputes for which the building industry is notorious occur mainly in the larger cities, where the unions are en-

³⁹ TNEC Hearings, *op. cit.*, p. 5264.

⁴⁰ Based on cost breakdown in *Architectural Forum*, February, 1938, p. 115.

trenched, and on large construction jobs. Strikes for higher wages and shorter hours often accompany the revival of building activity, but jurisdictional disputes may arise at any time. This species of internecine warfare among the crafts is responsible for the greatest share of labor trouble and offers the least justification for the cost that it imposes.⁴¹ The quarrels are not between employer and employees, but primarily between trades within the federation of unions, each claiming exclusive jurisdictional right to the performance of some operation.⁴² For example, in Chicago, a dispute arose between the carpenters and the roofers over the installation of strip shingles.⁴³ Another costly strike was caused by a disagreement between plumbers and steam fitters over the installation of \$800 worth of special, compressed-air cleaning pipes.⁴⁴ A prewar strike on an emergency building job made 2,000 workers idle; the issue was whether the plasterers' helpers or the carpenters should build small wooden horses.⁴⁵

For years, organized labor has been seeking some effective machinery for prompt and fair settlement of jurisdictional disputes, but with only a modicum of success. In 1936, a national referee was appointed by the unions to render final judgments on disputes, but though the plan worked more successfully than the devices involving boards and commissions that had preceded it, modifications were necessary in 1939 to increase its effectiveness. The most important feature of the amended scheme, from the standpoint of building costs, was the provision that there should be no stoppage of work by reason of jurisdictional disputes. However, work stoppages have continued, and there is no present evidence of a satisfactory solution of this problem.

Another species of jurisdictional claim that contributes to the cost of construction is the insistence of certain skilled trades on the exclusive right to perform tasks that do not in fact require any special skill and

⁴¹ One estimate based on conditions during the first part of the century places the responsibility on jurisdictional disputes for 95 per cent of the strikes and 75 per cent of the days of idleness in the building trades, but it is doubtful that this condition still obtains. See William Haber, *Industrial Relations in the Building Industry* (Cambridge, Mass.: Harvard University Press, 1930), p. 153.

⁴² Haber lists the primary causes of jurisdictional disputes as follows: Introduction of new building materials, introduction of machinery, changes in construction methods, aggressiveness of some unions, the prevalence of dual unions, and the claims of unions among industrial workers. *Op. cit.*, p. 156.

⁴³ R. E. Montgomery, *Industrial Relations in the Chicago Building Trades* (Chicago: University of Chicago Press, 1927), p. 134.

⁴⁴ Editors of *Fortune*, *Housing America* (New York: Harcourt, Brace & Company, Inc., 1932), p. 83.

⁴⁵ *United Construction Workers News*, Aug. 1, 1940.

to receive full union wages. For example, journeymen painters may claim the work of shifting scaffolds and canvasses and of cleaning paint spots; carpenters insist on performing the simple operation of stripping forms off concrete; or for the operation of a small gasoline pump, requiring no skill, the hoisting engineers may claim jurisdiction.

In some cities, union rules exist that require "full crews" to be used in certain operations, although in many cases the operation could be more economically performed with fewer men. For example, the engineers require one man to a machine, where several machines of some types could easily be operated by a single engineer. It is a regulation that each journeyman steam fitter must always be accompanied by a helper. There are instances where a foreman's rate must be paid to a single journeyman if he is alone on the job, even though there be no supervisory functions.

The accusation of deliberate limitation of output by union members is, in part, supportable. Most of the unions openly condemn such practices, although there are a number of union rules that act as limiting factors. Limitations are put on the width of the brushes that painters may use. Some local lathing unions have regulated the number of lath to be nailed in one day, and bricklayers often have informal understandings on a normal day's production. Union leaders, at meetings of the locals, sometimes warn against working too fast on particular jobs or cite individual members for setting too fast a pace.⁴⁶ Effective limitation of output is secured by restrictions on the use of machinery and other laborsaving devices. Painters may not use spray guns; in Chicago, premixed concrete has been forbidden, plumbers oppose shopwork, and cement masons object to the use of more efficient leveling devices. It is generally true that unions resist, sometimes by violent means, the introduction of new construction materials that threaten to reduce the need for skilled labor.

It is a basic policy of the building trades to limit the supply of workers to the number of jobs. This objective is sought through control over the number of new workers entering the trade. For example, it is generally provided that the number of apprentices accepted may not exceed a maximum proportion of the total working force, and, on a particular job, the ratio of apprentices to journeymen must fall within specified limits. Apprentices must serve from 1 to 6 years at a progressively increasing wage scale. They are often indentured to one employer for the whole period. During times of general unemployment, the number of new apprentices accepted is reduced until conditions improve. In

⁴⁶ National Resources Committee, *op. cit.*, p. 88.

general, union rules on apprentices have the effect of discouraging young persons from entering the trades or older workers from learning and entering the building crafts. Other devices by which unions limit their membership include high initiation fees and trade examinations. Furthermore, they may simply refuse to accept any new members and can exclude union members from other communities by a system of permit cards. Whatever may be the method of restricting union membership, it is clear that the unions cannot limit the total supply of building labor except in areas where they control the market. It is possible, however, to maintain an adjustment between the union memberships and the number of union jobs that are generally available in each area.

The pressures of the postwar building boom upon the labor supply have led to a great expansion of the apprentice system. Under pressure from public opinion in support of Federal programs to find jobs for veterans and to overcome the housing shortage, unions have relaxed restrictions on apprentice entry. By September, 1946, there were 67,000 building-trades apprentices in training.⁴⁷ Another estimate placed the total building workers put in training during 1946 at over 100,000.

While it is true that many of the union practices that have been described have the tendency to maintain building costs at higher levels than otherwise might be attained, due consideration should be given to the underlying union objectives. The struggle for higher wage levels reflects the essential economic insecurity and uncertainty of employment among the trades as a result of the nature of the industry. Limitations on union membership are designed to ensure work for the existing membership in so far as possible. It is significant that the spreading of work is a basic union policy. Restriction of output, where it exists, is aimed at the protection of job security and of professional prestige and is a defense against exploitation by the employer. In some cases, such restrictions are health and safety measures. Jurisdictional disputes, the least justified item from a public standpoint, stem from the struggle of the several crafts to protect each its own status even against fellow workers within the federation.⁴⁸ The building trades, far from being radical as some persons mistakenly believe, are essentially conservative; their major conflict is with change that threatens status and

⁴⁷ *Journal of Housing*, vol. 3, no. 10, p. 221, October, 1946.

⁴⁸ The CIO has undertaken to organize the building workers and has already met with success in a few areas. The chief advantage of this vertical organization of the industry claimed for the employer and the public is the elimination of the sharply drawn craft lines that give rise to jurisdictional disputes. The prefabrication industry would seem to be a logical point of entry into the building industry for the CIO.

security. In the opinion of one authority ". . . the building-trades worker views his organization as a business institution paying dividends in the form of higher wages, shorter hours, better working conditions, and greater control over those factors which endanger the security of the job . . . the practices and policies enforced are not unlike those enforced by businessmen generally."⁴⁹

There are many problems in the field of labor that face the postwar building industry. The recruiting of new workers to meet the needs of the industry is a major task, for the return of experienced craftsmen from their wartime occupations in other lines of activity has not met the demand. The recruiting of new workers will become increasingly difficult as unions resist further increases in the ratio of apprentices to journeymen. Work stoppages from a variety of reasons will probably continue in spite of efforts to set up machinery to prevent them, for local unions are independent and do not always follow the dictates of the national leaders. The spread of sentiment against the closed shop and the legislation that prohibits the closed shop will create irritations not conducive to industrial peace. The decline in labor efficiency is a reality and reflects a postwar letdown, a feeling of relative security in light of labor shortages, a resentment against notoriously wide profit margins for contractors, increasing age of building mechanics, and the inexperience of recruits. Wage rates are on the upgrade and when added to the element of low efficiency of labor may contribute to construction costs so high as to choke off the incipient building boom, or, more likely, will encourage an increased rate of mechanization of the industry, a more rapid spread of prefabrication, and the substitution of materials and products requiring less skilled labor in their installation. So long as the general building boom continues, house building will continue to suffer from labor pirating by contractors on nonresidential work. As the volume and proportion of factory-built houses increases, or as a result of a falling off of construction activity there will probably develop an increasing resistance on the part of the American Federation of Labor craft unions to prefabrication.

Obstacles to Rationalization

The contrast is marked between the typical building operation and the integrated, large-scale production process that we associate with modern industry. In the case of large, nonresidential buildings of special design there is no reason to expect the application of mass-production methods. The fact is that many of the large contracting organizations that spe-

⁴⁹ Quoted from Haber, *op. cit.*, p. 81.

cialize in heavy construction are well equipped to conduct a highly efficient building operation within the limits permitted them by local building codes, union rules, and the rigidities of the building-product distribution system. These aspects of the building industry contribute to waste in all types of construction, but it is generally house building that comes in for the greatest criticism as an archaic and inefficient process.

We have seen that much of the building industry is at a retarded stage of industrial development. Building is a loosely integrated process, which scarcely justifies the term "industry." It is inefficient organizationally and appears to lag far behind other industries in the application of machine techniques. It is subject to an unusual number of institutional restraints from both within and without. It is characterized by a relatively high degree of irregularity in level of activity. For these and other reasons it is a common conclusion that the process of building is wasteful and inefficient and that the production costs, particularly in the case of houses, are unjustifiably high.

But this viewpoint should not be accepted without full recognition of certain inherent obstacles to the rationalization of the industry and without an appreciation of the reasons for some of the institutional lags. In the first place, the product is not well suited for mass production. It is bulky and complex, made of a very great number of parts and a very wide variety of materials and equipment. It is traditionally a nonstandardized item, at least with respect to much of the market demand. Each unit must be finally assembled and finished on a separate plot of ground and in the open. The market that is served by the building industry is historically local and thus limited; the market is irregular and capricious and subject to swings of unusually wide amplitude.

The building industry has developed into a system that lacks the strong management and the integration of functional groups that are found in other industries. The reasons can be found in the nature of the product and of the market. Colean has listed seven functional groups that participate in the building operation and are sufficiently independent to give rise to discord and effectively to prevent the growth of strong management. These groups are: the builder or general contractor; the special trade or subcontractor; labor; the architect and engineer; the land subdivider; material producers and distributors; the government and underwriters.⁵⁰ We have seen how the general contractor is often unskilled in management, not too well trained technically,

⁵⁰ Colean, *op. cit.*, p. 314.

is underfinanced and typically operates on small scale in a local market. The subcontractors are also small operators and are often parties to certain types of costly trade restraints in the distribution of building products. The strength of labor in the building industry, founded upon the wide variety of skilled operations that are involved, is as well known as the labor practices that hamper rationalization. The designer and engineer participate in the managerial process and the land subdivider greatly influences the finished product, though he may have no connection at all with the remainder of the building process. Material producers and distributors play a central role with an independence that has permitted trade restraints and has inhibited the technical development of products and materials. Finally, government lays a heavy hand on building through such controls as building codes and zoning ordinances. Each of these groups, operating in its own interests and often in ways that are counter to the interests of the industry as a whole, engage in practices that inflate production costs and hamper the rationalization of the industry. There is no central managerial control sufficiently forceful to break through the traditional barriers.

Instability and uncertainty are at the core of the difficulties in the building industry. The greatest obstacle to the reorganization and industrialization of the industry has been the lack of large-scale, integrated building operations of sufficient size to command the best of engineering and administrative talent and sufficiently well financed to carry through times of depression. In the absence of such organizations, there has been little forward-looking experimentation in techniques and little research except by material manufacturers who are concerned only with their own product. But in a market as unpredictable and irrational as the building market, the appearance of large building organizations has been rare. The exceptions to this generalization are found in the large metropolitan areas, where, both in residential and in nonresidential buildings, the market is sufficiently broad to give some stability and sufficient scale to justify a large-size productive unit. For the most parts of the country, the local nature of the market, its narrow scope, its wide fluctuations, its imperfections in lack of market information and institutional rigidities, the cutthroat competition, and the tendencies toward boom and overproduction—all these and other factors have contributed to a notorious instability, which is hardly conducive to the large-scale financial commitments that are required of mass production. Nor is it to be expected that building organizations will invest time and money in research and the development of new techniques when the future is so uncertain. Furthermore, the resistance of labor to change, the hurdle of the archaic building codes in many localities, the traditional contract

system, and the ease with which new building organizations may establish themselves and destroy the market with desperate underbidding are not encouraging to the introduction of modern industrial methods.

But there are indications of a revolution in the building industry, particularly in house building. It is not alone the appearance of new materials that hold much promise, but also a movement that lies deeper in the realm of industrial reorganization and mass-production techniques. Even before the war there were a number of examples of a successful approach to industrialization in house building. In some of the metropolitan areas, operative builders were constructing hundreds of houses a year on a line-production basis. In some instances, only a limited standardization of the product was involved with no essential change in the pattern or techniques of the process of fabrication.⁵¹ Some of the large concerns used their own crews for much of the work, but some subcontractors were employed.⁵² There were economies to be secured in large-scale purchasing but it is probable that the greatest source of efficiency was the reflection of skillful management, which successfully exploited the economies inherent in large-volume, continuous production.⁵³

During the war there was a continued development of mass house building and the evolution of a scheme popularly known as "site fabrication" or the "California method."⁵⁴ This type of operation involves line-production methods and a considerable standardization of the product. As a result, many of the structural members can be precut and preassembled before delivery to the point of final erection. The work is done in sheds or shops set up at the development site. This type of operation calls for intricate scheduling of operations, and it requires considerable working capital and a large managerial overhead. For these reasons, it is not practicable except when a very large, community-type development is involved.

⁵¹ The large producers concentrated in the medium-price class. See *Builders of One-family Houses in 72 Cities*, Bureau of Labor Statistics, U.S. Department of Labor, Serial no. R1151 (Washington, D.C.: U.S. Government Printing Office, 1940), p. 1.

⁵² See "5,500 Houses on Speculation," *Fortune*, March, 1938, p. 100. The proposals of the Committee for Economic Recovery envisioned the creation of 40 large construction companies distributed over the country, each capitalized at \$1,000,000. Each company would build three planned communities of from 200 to 2,000 houses each. Economies were expected from combined purchasing, skilled management, and lower hourly wages for labor in return for guaranteed employment. See *Architectural Forum*, April, 1936, p. 366.

⁵³ One writer asserts that 15 per cent of this saving is accounted for by a lower wage paid to labor on a weekly or piecework basis. A. C. Shire, "The Industrial Organization of Housing," *Annals*, March, 1937, p. 37.

⁵⁴ See *Fortune*, April, 1946, p. 145.

We now turn to look at factory prefabrication of dwellings, for this method has stirred the imagination of us all and gives hope for a far-reaching revolution in the house-building industry.

Prefabrication

In all construction there is considerable prefabrication of materials and equipment. With a few exceptions, almost all the components of the structure are semiprocessed by the time they are delivered to the site. Lumber has been milled, doors and windows are ready for installation, shingles ready for nailing, and such items of mechanical equipment as doorbells and furnaces are factory finished. There have been some successful attempts to extend prefabrication either in the shop or on the site. Lumber is sometimes cut to length in advance of delivery to the carpenter for installation. The plumbing installation may be cut and fitted in advance of placing it in the structure. Schemes have been introduced for the fabrication of wall, floor, and ceiling panels in the shops of local contractors. But for the most part, none of these variations of the conventional procedure has effected economies sufficient to bring about a general reordering of the time-honored building process.

Total factory production of all structural components, popularly termed "prefabrication," was prematurely born during the dour days of the early 1930's.⁵⁵ This was a time when the building industry was dormant, when architects and construction engineers had little else to do but dream, and when manufacturers and the producers of raw materials were desperately trying to find new outlets. Many industrial organizations turned their energies to the designing of a dwelling that could be mass produced, employing techniques with which they were most familiar or utilizing materials for which a new market was sought. Dozens of new companies were formed in the fond hope of breaking with tradition and tapping a vast mass market for a standardized product at a low price. Journalists and trade periodicals, seizing upon one of the few hopeful items of the times, found in prefabrication the promise of a great new industry that would lead the nation out of depression. The economies inherent in the mass production of houses were likened to those in the automobile industry. But of the many organizations that in the early days hopefully played with prefabrication, only a corporal's guard remains in the field.

The prewar period of experimentation produced not more than 10,000

⁵⁵ "This form of construction calls for the fabrication in the factory of all parts of the house in comparatively large units which are as nearly as possible in their finished form and which can be easily and rapidly assembled and fastened together on the building site without the usual cutting and fitting." Shire, *op. cit.*, p. 47. .

houses that might be described as "prefabricated." Military and defense construction resulted in the erection of some 200,000 more units during the war. The opportunity for prefabricators to reach volume production as a result of wartime contracts was in one sense a boon to the industry. However, no single producer was able to maintain sustained operations for long, for the housing needs of warworkers were finally met and house building came to a virtual standstill. Wartime prefabrication experience was unfortunate in one important respect. The dwellings built under government contract were designed for temporary occupancy during the emergency; speed of erection and economy were major considerations. As a result, the quality of the prefabricated units, when measured against permanent, conventionally built dwellings, was relatively low, and the whole prefabrication industry suffered some loss of confidence and respect.

The postwar housing shortage called attention to the potentialities of mass production in housing. Further, there was hope that an important net addition to the productive capacity of the building industry might result from the development of prefabrication. As a result, the original program of Housing Expediter Wyatt called for a goal of 250,000 prefab units in 1946 and 600,000 in 1947. But the industry was not organized to meet this challenge, and the end of 1946 found only a total of some 36,000 prefab units completed. In part this level of production reflected material shortages, but to a greater extent it was the more fundamental limitations of design problems, organizational and financial difficulties, and production bugs. Hundreds of prefabricators plunged into the field, some by expanding existing organizations already engaged in building or the building-material business, others as new ventures. Many were inept; most were inadequately financed; and but few of the products and production processes were tested and proved. The mortality in the industry has been high. It was reported by the Prefabricated Home Manufacturers' Institute early in 1948 that about 80 companies were actively engaged in house production. These companies had an aggregate capital of \$60 million and a total annual capacity of 120,000 units.⁵⁶

Any forecast of the future of prefabrication calls for a more extensive analysis than can be made here; but there are certain well-established aspects of the subject that may be quickly summarized. In the first place, there are no technical reasons why a well-designed prefab cannot be as sound structurally and as durable as a conventionally built house. In appearance, the prefab can be dressed up so that it is indistinguish-

⁵⁶ Reported in *Housing Progress*, vol. IV, no. 1, p. 35, Winter, 1948.

able from other structures. The use of interchangeable panels imparts an inherent flexibility to prefabrication that can be reflected in both interior and exterior variation equal to or greater than the variation found in conventionally built units of the same price class. However, at the present stage in its development, the factory building of houses is not and does not generally claim to be adapted to the production of custom housing for those families which can afford the luxury of individuality.

It is an unfortunate fact that prefabrication has not yet demonstrated convincingly that advantage which was to have been most significant—economy. The prices of prefabs are not yet much, if any, lower than the prices that buyers must pay for conventionally built homes of equivalent capacity and equipment. In part, this lack of advantage reflects the early stage in the development of the industry and the absence of that large volume production from which the economies are expected to emerge. There seems to be little doubt that there are substantial economies inherent in the methods typically employed by prefabricators; but the savings in production must be sufficient to offset the increased overhead and costs of distribution. The production advantages are to be found in direct purchase of large quantities of materials and equipment directly from the manufacturer; the application of machine methods to repetitive operations; and the wage savings through lower rates for shopwork by skilled labor and the greater use of semi-skilled and unskilled workers.

Basically, the growth of prefabrication depends on the future market demand for its product. The immediate and future needs for housing are very great, and a large volume of house production appears to be inevitable. The question is what share of this will the prefabrication industry succeed in capturing. Consumer resistance has been long recognized as a major obstacle. It is hoped that the present desperate need for shelter will overcome this hesitancy to such an extent that a general acceptance will be gained upon which future expansion can be founded.

The major obstacles that face the prefabrication industry are consumer resistance, archaic building codes, lender conservatism, and labor-union antagonism. As suggested in the last paragraph, consumer resistance may break down during this postwar period when the fact of shelter is more important to the buyer than its physical properties. Recent surveys have shown that prefabrication is misunderstood, that it is often associated with low quality and with unacceptable, "modernistic" design. Only a relatively low proportion of potential home buyers are actively interested in prefabrication. Probably the most potent device in gaining

consumer acceptance is price differential; if prefabricators could offer a house at a figure that is significantly lower than the price of competing, conventionally built homes, most of the consumer objections would be forgotten.

Building codes in many communities do not permit the erection of any of the usual prefab products. So long as consumer resistance remains a strong force and labor antagonism exists, the revision of these codes is a difficult matter. Another obstacle to the spread of prefabrication is the conservatism of lenders. Although many prefab systems have the approval of the Federal Housing Administration for mortgage insurance purposes, lending institutions are inclined to hesitate to commit funds in loans on homes that are not fully accepted by consumers and hence are less desirable as collateral which may have to be sold in case of foreclosure.

The antagonism of the craft unions to prefabrication is understandable and may very well increase in intensity as prefabrication absorbs a progressively greater share of the market. The present situation in the building industry is laying the groundwork for future strife. At present, with the great need for all types of construction, the prefab industry is not ready to carry a large share of the burden. As a result, building labor is being recruited at an unprecedented rate for work in the established manner. As our building needs are met, we shall find that the swollen ranks of the craft unions will begin to suffer from unemployment and will strongly resist any further encroachments by the expanding prefab industry. Both the AFL and the CIO are moving in on the prefab industry. The latter organization sees in it a golden opportunity for the spread of industrial unionism at the expense of its rival, the AFL. This latter group is fighting a defensive battle and has worked out a few agreements permitting its members to work in prefab plants and to engage in the erection of prefabs. But in a time of labor shortage, the underlying issues are submerged. There is a chance that under these circumstances, when there is plenty of work for all, the prefab industry may gain a momentum that will defy the attacks of the craft unions when the time of reckoning shall finally come.

A recent pithy summary of the progress of the prefab industry expresses the consensus of informed observers.⁵⁷

The house—good but not great.
The industry—alert but amorphous.
Costs—not low enough.
Mass output—still a future.

⁵⁷ *Fortune*, vol. XXXIII, p. 127, April, 1946.

CHAPTER 8

URBAN LAND CREDIT

Urban real property is used as security for the advance of funds in connection with both the construction process and the financing of ownership. Construction loans are short-term advances of working capital for the producer; the other type of credit is long term and facilitates permanent investment in landed property. Both types of credit are essential to the creation of wealth in the form of serviceable space and shelter for the conduct of urban functions.

Within our present institutional framework, land credit is an essential component of the market process. Without its free use, new investment would be restricted and market transactions less responsive to changes in balance and price. The present imperfect market would be still more imperfect. Now that we have examined the factors of both demand and supply in the urban land market, we must understand this important catalyst, land credit, as we begin to explore the subject of the real estate market processes and mechanisms.

Functions of Land Credit

The capital requirements for investment in units of urban land ownership or for the development of urban land are typically large relative to the personal income of owners and relative to the annual returns from the property when in operation. For example, prospective home buyers are faced with an outlay of capital that is two to three times their annual incomes. Within our economic system, the return on urban real estate in the form of land and buildings, as a productive agent, is adjusted to a long productive life and therefore is small annually relative to the amount of the initial investment. In reflection of these economic relationships, credit plays a central role in real estate investment, and the typical financing arrangements call for a small equity and a large debt. Both in home and in income property investment, the initial capital usually comes in large part from sources outside the assets of the entrepreneur or prospective owner. Thus credit has the effect of

multiplying the cash resources of the investor.¹ In the financing of home purchase, the buyer usually invests from 10 to 20 per cent of the purchase price from his own funds and borrows the balance. In the financing of commercial buildings, the owner's contribution may be somewhat more substantial. Rental housing developments financed by a Federal Housing Administration insured mortgage call for only a 10 to 20 per cent equity contribution by the developers. During the real estate boom of the twenties, before the time of FHA mortgage insurance, apartment buildings, hotels, and office buildings were often financed with an owner's contribution of no more than 10 to 20 per cent, and in many cases it is reported that the funds borrowed were actually in excess of the total capital requirements. Such gross overborrowing was accomplished by dishonest appraisals, overcapitalization, and the use of second and third mortgages.

Although the typical pattern of real estate investment with its high proportion of borrowed funds may be said to be normal or natural in light of the physical characteristics of the productive agent, it must be recognized that an accompaniment is a relatively high degree of investment risk for the equity holder. In the first place, real estate is subject to a considerable "business risk" because of its physical fixity and because of the unstable nature of the real estate market, a characteristic that will become more clear as we proceed through this volume. Property values fluctuate over a wide range, and the market moves from low periods of almost complete inactivity to boom peaks of feverish buying and selling. Compounding the effect of this instability is the typically high degree of "financial risk," which reflects the heavy fixed charges and obligations that accompany high percentage borrowing. For example, the home owner with a large mortgage and heavy monthly payments is vulnerable to economic fluctuations, which may cut his earnings and reduce the market value of his home below the amount of his unpaid debt.

Another important implication of the pattern of real estate financing is the strategic role of the lender in the process of real estate investment. He is an essential participant and may exercise effective control by withholding funds and by establishing conditions covering the advance of credit that can greatly influence the rate and nature of real estate investment. By restricting credit during the downward phase of the real estate cycle, the mortgage lender accelerates the collapse; by opening up the sources of funds, he may contribute to re-

¹ See Fisher, Ernest M., "The Role of Credit in the Real Estate Market," in *Tomorrow's Town*, vol. 5, no. 3, March, 1947, National Committee on Housing, Inc., New York.

covery. The lending policies of institutions and individuals can stimulate building in one part of a community and hasten the decline in property values in another. The lender can exercise a considerable control over the quality of land planning, architectural design, and construction, and, through lending policy, may encourage or inhibit technological change in construction techniques.

The terms under which funds can be secured for real estate investment have an influence on the return on the equity interest and hence upon the market price of property. At least in the short run, lower mortgage interest rates reduce financial charges and leave a larger net income for the owner of income properties. For the home owner, lower interest rates mean lower costs of shelter. Since lower mortgage interest rates make ownership of both homes and income properties more attractive, market prices are influenced. A reduction in interest rates would have the effect of stimulating new building and increasing real estate market activity. In general, the same result flows from changes in other terms of mortgage lending. For example, an extension of the period of amortization and a resulting reduction in the periodic amortization payment will reduce the fixed financial charges and make real estate investment more attractive. Provisions in the mortgage contract that are favorable to the borrower, such as arrangements that permit the lapsing of payments in case of illness or unemployment, tend to encourage investment and to support price. The catalytic properties of mortgage money in stimulating construction, in facilitating home ownership, or in stabilizing real estate values are the basis for much of the Federal legislation in the housing field. The enactments of the thirties setting up the Federal Home Loan Bank System and the FHA were primarily recovery measures designed to facilitate the flow of mortgage money into new construction. Secondly, the legislation was aimed at the encouragement of home ownership, the support of property values, and the long-term stabilizing of the mortgage and real estate markets.

There is another function of land credit that relates to the financing of the construction or manufacturing process. In this case, short-term credit is involved and the purpose of the advance is to provide working capital for a building operation rather than to finance investment or ownership. The availability of this form of credit is particularly important in view of the small capacity and limited financial resources of the majority of manufacturing or speculative home builders. Also, when construction is carried on under contract with the owner, there is usually need for working capital pending the payment of the proceeds of the permanent loan. Even though the working-capital advances, or construction loans, are normally secured by a mortgage on the property

as in the case of the permanent financing, the purposes of the advances in the two cases are quite different and the terms of the mortgage contracts vary in accordance with the functions of the loan.

In the process of subdividing and land development, loan capital is required. Various functions are performed by credit advances: the working-capital needs of the developer are met, the capital invested in land and improvements is advanced until it can be repaid out of the proceeds of the sale of the lots, and lot purchasers are enabled to acquire full ownership over a period of time by making a small down payment and periodic installment payments. The various devices that are used have been discussed in Chap. 7 in connection with the subject of land preparation.

Forms of Land Credit

The owner's contribution in the financing of real estate ownership is known as his "equity." This term is popularly understood to connote the difference between the total investment and the amount borrowed. However, there is a distinction between the book value of the owner's interest and the value of the equity when equity is defined as the difference between the actual or market value of the property and the amount owed. When a building is new and represents a proper improvement of the land, the amount of the equity under these two definitions would be the same. But in cases where the building is not appropriate to the site, it is possible that the true worth of the owner's interest may be less than the dollar amount of his investment. It is also possible that in the middle or late life of a structure, forces of urban change may result in a devaluation of the property at a rate faster than the debt is being retired, with a result that the recoverable equity may diminish more rapidly than the book equity.

The use of real property as security for advances of capital has led to the development of specialized loan contracts and legal instruments. While banks and individuals are important sources of real estate credit, special lending institutions, such as savings and loan associations and mortgage companies, have evolved to meet the peculiar demands of borrowers whose prime and often only collateral is real estate. Though we must recognize the unique aspects of this field of investment, we should not lose sight of the fundamental purpose of all investment—the advance of capital or, more properly, the advance of the goods or services that are acquired by the borrower out of the proceeds of the loan.

The two basic classes of real estate advances that are used to finance ownership have their counterparts in other fields of finance. The first

type, the home loan, is in the nature of consumer credit. In most cases the debt is incurred to finance the acquisition of a home and is retired out of the personal income of the borrower. This type of loan differs from installment credit on a radio or an automobile not so much in basic purpose or method of repayment as in the magnitude of the advance and the ease and speed with which the property may be seized by the lender in case of default. The other class of real estate loan is a form of long-term financing of income property that is capable of producing sufficient returns to retire the debt during its productive life. Where employed by corporations, the credit of the corporation stands in the place of personal credit. In the typical instance, the chief business of the borrowing corporation is to operate the property whose acquisition is being financed, and the property itself thus represents the chief asset of the corporation. In many instances, of course, corporations engaged in other lines of business finance the acquisition of land and buildings by pledging them as security for loans.

We shall direct our consideration of real estate financing to the two basic types outlined in the preceding paragraph—the financing of homes and the financing of income property. We shall consider certain matters that are common to all types of transactions involving the advance of capital, but we shall give particular attention to the special problems and techniques of financing the ownership of real estate.

A number of varied contractual and legal patterns have been developed to fit the various circumstances surrounding financing transactions involving real estate. The lender seeks an agreement that will offer the greatest protection for the principal of the loan and the maximum of assurance of the interest return. The borrower seeks to protect his equity against untimely extinction through a contract that permits of flexibility in payments in case of temporary financial disability and takes advantage of the benevolence of the law toward the debtor. The various arrangements in common use will be discussed separately, with a description of the situations in which they are appropriate and a consideration of the basic legal implications.

Mortgage Financing. The term "mortgage" has become perhaps the most familiar expression in real estate finance. The popular concept of the mortgage as an obligation is misleading and technically incorrect. It is true, of course, that the mortgage is never used unless a debt exists, but the evidence of debt customarily takes the form of a separate and independent instrument, the note, usually referred to as the "mortgage note." This instrument contains the admission of debt by the borrower and his agreement to pay interest and to repay the debt in accordance with the terms set forth in the note. The mortgage is simply a legal

device that assures the lender of the possession of the collateral property or the proceeds from its sale in case of default on the note.

Real estate has been used as security for debt for a great many centuries, but the nature and effect of the legal device created to protect the lender has been altered and refined in accordance with the needs of the times and the judicial interpretations of the equities of the parties. Under ancient Jewish law, real property was used as collateral for debt, but with the interesting limitation that, at the time of the succeeding Jubilee, a religious festival that occurred every 50 years, the land reverted to the borrower free and clear of all encumbrance, whether or not the debt was paid. The early Roman form of mortgage, the *pignus*, involved the pledge of the collateral property, which passed into the possession of the lender and could be redeemed upon payment of the debt. This type of pawnbroker arrangement was applied to both personal and real property until there evolved a new arrangement, which permitted the owner of the land to remain in possession of his property contingent upon the payment of his debt. This device, distinguishing between things pledged and things mortgaged, was known as the *hypotheca* and is the direct forebear of the modern mortgage, in which the borrower retains the possession and use of his collateral.

In the course of time, it became recognized that the mortgage could be an instrument of injustice where hard-pressed borrowers agreed that in case of failure to make full payment of the debt by a specified date, irrevocable title to the property would be vested in the lender. Where the value of the property was far in excess of the debt or where a substantial portion but not all of the debt had been paid, the practice of wiping out all interests of the debtor upon default came to be considered unduly harsh. Thus we find that in the Anglo-Saxon form of mortgage, the *vivum vadium*, or living pledge, the lender took possession of the property at the time the loan was made and applied the net proceeds from its operation to the payment of interest and the reduction of the principal. However, the borrower undertook no obligation to pay, but retained the right to redeem the property at any time by payment of the debt. This scheme offered some protection to the borrower, but lenders found it difficult to liquidate their interests by selling off the property because of the continuing rights of the borrowers. Thus they refused to accept land as security, and a new form of mortgage evolved in English law, which swung to the other extreme of protecting the lender. This arrangement was known as the *mortuum vadium*, the dead pledge, and provided that the lender take not only possession of the land, but also a form of title of which he might be divested only upon payment of the debt in strict accord with the terms of the agreement.

It remained for the English courts of equity to mold the mortgage device into a workable form that established the rights of both parties on a rational basis. Relief to the borrower was provided by recognizing his "equity of redemption," a right to redeem the property even after default by reason of failure to meet the terms of the debt agreement for which the property served as collateral. This right was determined to be an estate in land, which was assignable, inheritable, and might be devised by will. To protect the lender against the permanent encumbering of the property, provision was made for the court action of foreclosure, through which, after a reasonable opportunity to redeem had been offered to the borrower, the equity of redemption might be wiped out. With the development of the equitable theory that the lender has no estate in the collateral property, but only a security interest or lien, has come the disappearance of the ancient practice of giving possession to the lender, for it is the universal custom that the borrower shall retain the use of the land. The final evolutionary step in basic mortgage law was the recognition of the right of the borrower to any excess value in the property above the amount of the debt. Thus it was made a condition of foreclosure that the property be put up for public sale and that the debtor be entitled to any surplus. This legal proceeding is called an "action of foreclosure and sale."

Among the several jurisdictions in the United States, there are technical differences in mortgage theory, differences that affect the legal devices of enforcement and the time and costs of foreclosure but do not substantially alter the positions of borrower and lender. In one group of states, comprised mainly of those states which were in the original English territory east of the Mississippi, the old common-law doctrine prevails. Here, the mortgage is interpreted as a deed that passes title to the lender until such time as it shall be redeemed by payment of the debt. As titleholder, the lender may take possession upon default. Nevertheless, an equity of redemption exists that can be extinguished only by foreclosure and sale. As another remedy in case of default, the mortgagee may bring action for the debt and levy upon the property.

In a second group of states, the common-law theory has been supplanted by statutory regulations. Here all forms of mortgage are regarded as mere security for debt, no title is considered to pass, and the lender has no right of possession when default occurs. In those states formed out of French and Spanish territory, modern mortgage law is founded on the principles of the old Roman civil law, which obtains in the Latin countries of Europe. Here the mortgage is viewed in much the same manner as by the English equity courts, so that these states may be classed with those jurisdictions now ruled by statute.

There is a special form of the mortgage device, which is known as a "trust deed in the nature of a mortgage."² This instrument is widely used in a number of Eastern states in place of the ordinary form and is applied the country over in transactions involving large amounts. The trust deed is used to convey the interest of the mortgagor in the premises to a corporate or individual trustee who holds the title as a pledge of payment of the mortgage note. Upon payment of the debt in accordance with the terms of the agreement, the trustee reconveys to the borrower. In case of default, the trustee sells the property and applies the proceeds to the debt, any surplus going to the mortgagor.

The foregoing account of the evolution of the modern mortgage and the discussion of the variations in mortgage theory have been presented as a foundation for an understanding of the true nature of this financing device. The statutory variations among states and the complications of rights and obligations of the parties preclude the possibility of summarizing mortgage law at this point. However, a few guiding principles will be presented. It is important to recognize that the mortgage transaction is governed by the law of the state in which the real estate is located

Two basic elements are required to create a mortgage, a debt, and a pledge of property to secure that debt. In the absence of either element, there is no mortgage, and if both are present, a mortgage results regardless of the form that the arrangement may take. By no agreement that is part of the mortgage transaction may the mortgagor waive, release, or convey his inherent equity of redemption. A mortgage may be made to secure the debt of another person, to secure debts that already exist, or to secure future advances, though in this last case the mortgage cannot be enforced if the advance is never made. Any appreciable interest in real estate can be mortgaged that can be sold or assigned, and one may not mortgage more than he owns. With some exceptions, these interests include fee simple estates, life estates, and leasehold estates. An exact determination of the interest or estate to be pledged requires a search for prior liens that may limit the mortgagee's claim. Such liens may be taxes, special assessments, prior mortgages, judgments, mechanic's lien claims, or decrees. Any cloud on the title must be considered, as well as private and public restrictions.

The specific form of the mortgage documents will not affect the fundamental nature of the transaction in the eyes of the law. However, to avoid misunderstanding and possible litigation, it is important to the parties to adapt the form to the intent. In many states, the statutes

² Used in nine states.

specify the form of the mortgage and state the effect that it shall have. In general, the mortgage should set forth the terms of the transaction with exactitude. It should describe the property pledged and the exact agreement with respect to the debt and the terms of its repayment. Express covenants may be included covering such items as the exact procedure in case of default or the distribution of the costs of enforcing the mortgage. The names of the mortgagor and mortgagee must appear and the date of the transaction. The mortgage note generally is a separate document, but it may be merged with the mortgage. In case it is separate, reference should be made to the mortgage instrument. In order to be enforceable, the mortgage must be properly executed, and each person having an interest in the mortgaged premises must join in the instrument if his interest is being pledged. The instrument should be promptly recorded in the office of public record provided by law in order to give notice to the world of the rights of the mortgagee and to protect these rights against subsequent liens. Failure of the mortgagee to place the mortgage on record creates the risk of losing his rights if an innocent purchaser acquires title without knowledge of the mortgage.

So long as the mortgage is not in default, the mortgagor remains in complete control and possession of the pledged property. He may sell the property subject to the lien of the mortgage, but even though the buyer assumes the debt and agrees to pay it, the original mortgagor is not relieved of his obligation and may be called upon to pay if default occurs and the property cannot be sold for enough to meet the unpaid balance. On the other hand, the buyer of a mortgaged property who agrees to assume the debt becomes bound as though he were the original mortgagor.

Some attention has already been given to the remedies of the mortgagee in case of default, and it was made clear that the nature of the remedies available are determined by the theory of the mortgage that obtains in the jurisdiction. It will be useful, however, to summarize the various remedies, recognizing that the law of the state in which the property is located will control the procedure. The most common remedy is foreclosure and sale, but occasionally resort is made to a suit at law to collect the debt without having recourse to the property mortgaged. If a judgment is secured it is possible that the property may be levied upon as an asset of the borrower. Another remedy is entry in possession of the premises for the purpose of operating the property and applying the proceeds to the debt.

The statutes of some states permit the sale of mortgaged property without court action. Where the instrument is a trust deed in the nature of a mortgage, the trustee may offer the property for sale and apply

the proceeds to the debt with any balance going to the mortgagor. Other states permit the enforcement of a power-of-sale provision in the mortgage, whereby the mortgagee may sell the property after giving prescribed notice. Many states require foreclosure by court action regardless of any agreements to the contrary.³

The procedure of foreclosure and sale follows the same general pattern under whatever circumstances it arises. Suit is brought by the mortgagee against the mortgagor and all parties of interest. A decree is rendered determining the existence of the debt and directing sale by some court officer if the debt is not paid within some short time fixed by the decree. Failure to pay wipes out the equity of redemption of the mortgagor, and the property is sold to meet the debt. Any surplus goes to the mortgagor. In some states the statutes provide that the owner may redeem his property after the sale by payment of the debt, interest, costs, and expenses within a specified time.

With few exceptions, the only bidder at the judicial sale of a foreclosed property is the mortgagee. In active markets, there may be other bidders, but it is generally the case that properties that are desirable can be sold before reaching the foreclosure stage. Thus, most of the properties offered at judicial sale are not readily marketable. Where the value of the property is less than the debt, the presence of the mortgagee as bidder discourages bargain hunters, since the mortgagee will bid up to full market value. The mortgagee usually bids in the property at some nominal price and is permitted to make payment in the form of an offset against the unpaid debt. In some cases foreclosure is circumvented by an agreement between mortgagor and mortgagee, whereby the mortgagor conveys title to the mortgagee by quitclaim deed when foreclosure appears inevitable. The mortgagee is often willing to pay the mortgagor for this action in order to avoid the costs and delays of foreclosure and sale.⁴

When the proceeds of the foreclosure sale are not sufficient to meet the unpaid balance of the debt, the lender may secure a deficiency judgment against the borrower for his unsatisfied claim. In many states this

³ Foreclosure is generally accomplished by court action in 29 states, by power of sale in 18 states and the District of Columbia. Notice or publication is used in Maine.

⁴ The severity of the depression that began in 1929, the freezing of the real estate market, and the wave of foreclosures on homes resulted in a number of mortgage-moratorium statutes restricting the right of foreclosure, extending redemption periods, and limiting the right to deficiency judgments. These enactments were sustained by the courts as emergency measures, but some of their features, particularly those relating to deficiency judgments, bid fair to become a permanent part of mortgage law.

judgment may be secured by the same court action that decrees the sale of the property. Historically, the amount of the judgment has been determined by the difference between the price brought at the sale and the total of the mortgage debt, costs, and expenses. Because the typical bid was a nominal amount, the creditor was enabled to possess himself of the collateral property and in addition secure a deficiency judgment of virtually the full amount of the debt. Actually, few lenders have made a profit through such a procedure, but the potential for injustice is great. During the depression of the thirties, when the equities of debtors became matters of considerable concern, many state laws were passed in the protection of the mortgagor. Legislation affecting deficiency judgments was of various types. Some laws attempted to discourage nominal bidding by permitting courts to set a minimum price for judicial approval at foreclosure sale. Other states substituted "fair value" for the sale price as the basis for the determination of the deficiency. Some states limited the life of deficiency judgments and others prohibited them entirely.⁵

In a very few jurisdictions a procedure known as "strict foreclosure" is permitted. This action is based on the common-law theory of mortgages and results in a decree that cuts off the mortgagor's equity of redemption without requiring judicial sale of the property. Thus the mortgagee is left as owner of the property in spite of any inequity affecting the debtor by reason of an excess in the value of the property over the amount of the unpaid debt. In practice, this device is generally limited to cases where an error in a prior equity foreclosure has left undisturbed the rights of some party at interest, thus necessitating a second foreclosure.⁶

The stumbling evolution of mortgage law has brought forth a system of remedies that is unjustifiably time consuming and costly in most of our states. Mortgage instruments are cumbersome and costly, and foreclosure proceedings are lengthy and expensive. The wide diversity of practice among the states is confusing and constitutes an obstacle for public and private agencies operating in a number of jurisdictions. The burden of this inefficient system falls finally upon the borrower in the form of higher charges and more conservative loans.

There are wide variations among states in the time required to complete foreclosure and in the total costs involved in the procedure. Both

⁵ Skilton, Robert H., *Government and the Mortgage Debtor (1929 to 1939)*. A doctoral dissertation, University of Pennsylvania. Privately published, 1944, pp. 117ff.

⁶ Grange, W. J., *Real Estate* (New York: The Ronald Press Company, 1937), p. 182.

time and cost are important considerations to lenders in estimating mortgage risk. In 12 states and the District of Columbia the costs of foreclosure are low, less than \$100, and the time requirement is short, in most instances less than 3 months. In 24 states costs are more than \$100; the time required is more than 3 months, and in addition, there is a period of redemption of 6 months or more during which the property remains in the hands of the mortgagor. In 11 states costs and time are equally excessive, but there is no redemption period. In some states costs run to more than \$300, and there are 10 states in which the time required is 15 months or more.⁷

The cumbersome and costly foreclosure process that characterizes so many jurisdictions has been an impeding factor in the spread of the long-term high-percentage amortized single mortgage. FHA mortgage insurance is not a complete solution, since foreclosure costs are not completely covered and since the property may be allowed to run down prior to foreclosure, thus requiring repairs for which full compensation may not be received. The best solution to this problem that has been proposed is the Uniform Real Estate Mortgage Act drafted by the Subcommittee on Law and Legislation of the Central Housing Committee. This model law greatly simplifies the entire mortgage transaction and would reduce costs of preparing the instrument and recording it. Foreclosure would be a simple, speedy, and inexpensive process. In general, all parties—the mortgagor, the mortgagee, and the public—would benefit. Unfortunately, to secure general adoption of this law throughout the country will be a slow if not impossible process.

Junior Mortgages. Up to this point, our discussion of mortgages has related to first mortgages, which constitute a primary lien on the property. In some cases, however, a second or even a third or fourth mortgage may be placed on the property. The designation of the mortgage refers to the priority of the claims under it. For instance, the rights of the second mortgagee are subordinate in every respect to those of the first mortgagee.

Junior mortgages are employed in cases where the proceeds of the first mortgage are insufficient to finance ownership. Because of the greater risks to lenders holding junior liens, interest rates are substantially higher than on first-mortgage loans. Although the second mortgagee may take steps to protect his interests, he cannot disturb the prior rights of the underlying mortgage. For instance, the holder of

⁷ The data quoted in this paragraph are based on Home Owners' Loan Corporation experience in foreclosing mortgages. See Russell and Bridewell, "Mortgage Law and Mortgage Lending," *Journal of Land and Public Utility Economics*, vol. XIV, no. 3, p. 301, August, 1938.

a second mortgage may pay the interest on the first mortgage in order to prevent foreclosure but he does not thereby acquire a claim superior to that of the first mortgagee. If the first mortgage is foreclosed, any surplus from the proceeds of the sale, after meeting costs and the payment of the first mortgage, is applied to the second mortgage. In case of default on the second mortgage only, the lien may be foreclosed and the property sold, but the purchaser acquires title subject to the first mortgage.

Land Contract. In some parts of the country, particularly in the Middle West, the land contract is a widely used device for financing the purchase of homes and subdivision lots. In its essentials, the land contract differs little from the preliminary sales contract customarily used to bind the parties to a real estate deal pending final closing. In brief, a land contract is an instrument expressing the agreement of the owner of land, the vendor, to sell and convey title to the purchaser, the vendee, upon the payment of the purchase price; the purchaser contracts to pay the purchase price in accordance with a definite time schedule and to pay interest on the unpaid balance. When employed as an instrument of long-term financing, the land contract frequently contains such special provisions as those providing for possession by the purchaser and requiring him to pay taxes, insurance, and current upkeep. In general the land contract is a security device that serves substantially the same purpose as a mortgage, namely, to give possession to the purchaser, to provide for the payment of the purchase price by a series of installments extending over a relatively long period of time, and to secure adequately the purchase price of the property for the seller. The legal differences between the land contract and the mortgage stem from the fact that under the land-contract arrangement the vendor, or lender, retains legal title to the property, whereas the mortgage constitutes a lien conveyed to the seller, or lender, and attaching to the legal title possessed by the buyer, or borrower. This fundamental difference affects the methods and ease of enforcement.

During the life of the land contract the major interests and rights of the vendor, or seller, are composed of legal title and the right to payments under the terms of the contract. In the eyes of the law the principal part of the vendor's interest is the right to payments, and the bare legal title is held to be merely a device for insuring these payments. Thus in some states the vendor's interest under a land contract is held to be personal property. It is customary for the vendor to reserve the right to place upon the land a mortgage that will create a lien superior to that of the vendee. This provision is not objectionable if adequately safeguarded.

The major right of the vendee is the right to a conveyance of title by the vendor upon the completion of the payments under the contract. Courts of equity regard the vendee as the owner of the property that he is purchasing so long as he performs his obligations. His ownership is equitable and not legal, but as between vendor and vendee or all others who have notice of the contract arrangement, the vendee is the effective owner of the land. It is customary to include provisions in the contract granting the right of possession to the vendee and providing that the vendee shall pay taxes and insurance premiums.

In general, statutes provide for the execution of land contracts under the same general rules as control the execution of deeds. Land contracts may be recorded when properly executed, although recording is not essential to protect the interests of the vendee provided that he goes into immediate possession of the property. Possession serves as notice of the vendee's rights in the land to a subsequent purchaser.

The remedy of specific performance that is available to the vendee in a court of equity adequately protects his interests. In accordance with this doctrine the vendee can compel the vendor to convey to him the specific piece of property covered by the land contract upon the completion of his payments. He need not be satisfied with simply the recovery of the purchase price or with money damages.

The remedy of the vendor in case of default by the vendee is based upon his retention of the legal title to the property. He may declare the contract forfeited and take peaceful possession of the property upon voluntary surrender by the vendee.⁸ In some states he may institute court action to obtain a writ of restitution for possession of the property. Such an action ordinarily allows a period of time during which the vendee may redeem by the payment of the amount due together with court costs. Another course of action open to the vendor in some states is suit in ejectment in order to gain possession of the premises where voluntary surrender is not granted.

If the vendor desires to enforce the provisions of the contract rather than to treat the contract as at an end, he may sue for past-due installments or he may institute an action to foreclose the contract in equity. The latter procedure is similar to that involved in the foreclosure of mortgages and leads to the public sale of the property with the proceeds applied to the debt. This procedure is a device for effecting specific performance of the contract.

Long-term Lease. A long-term lease does not differ in effect from the common short-term instrument that grants possession of a house or com-

⁸ Forfeiture allows for no recovery of payments already made.

mercial building in consideration of rent paid in monthly or annual installments. In general, short-term leases run for periods up to 30 or 40 years and relate to the use of existing buildings and the land upon which they are mounted.⁹ Long-term leases typically cover vacant land and convey rights that may run to "999 years renewable forever." Ground leases of this kind are undertaken by lessees who contemplate the erection of buildings and who must be assured of undisturbed occupancy for a period of time sufficient to write off the construction costs out of the proceeds of operation. Special provisions of the lease may cover the security given for payment, termination provisions, and the distribution of condemnation awards or insurance monies.¹⁰ The long-term lease is an instrument of finance in the sense that it covers an advance of capital in the form of land required for a building project. The ground rents are in the nature of interest payments and the reversionary rights retained by the lessor assure him of the return of the landed capital at termination.

Home Financing

The problem of financing that faces home owners or buyers may arise under any of the following circumstances: (1) the purchase of an existing house either new or used; (2) the construction of a new house; and (3) the refinancing of an owned home.

In rare circumstances a buyer may make an outright purchase for cash of a new or used house and thereby secure immediate title to the property without encumbrance. The most frequent arrangement, particularly for new houses, involves a cash down payment of from 10 to 50 per cent, an immediate conveyance of title, and an advance of funds from a lending institution secured by a first mortgage on the property. In the case of existing houses where the seller owns the property free of debt, he may agree to take back a mortgage as part of the purchase price. This is known as a "purchase-money mortgage." Where a house is already mortgaged at the time of sale, the buyer may make a cash payment equal to the difference between the amount of the mortgage and the total purchase price and at the same time assume the existing mortgage, i.e., take over the obligations of the seller under the existing mortgage arrangement. It will be recalled that such an agreement on the part of the buyer does not relieve the seller of the obligations under the mortgage unless he is specifically released by the mortgagee. In some cases,

⁹ Fisher, Ernest M., *Advanced Principles of Real Estate Practice* (New York: The Macmillan Company, 1940), p. 83.

¹⁰ *Ibid.*, p. 95. See also Fisher and Niehuss, "Problems of Long-term Leases," *Michigan Business Studies* (Ann Arbor: Bureau of Business Research, University of Michigan, 1930), vol. II, no. 8.

particularly where the cash payment is small and fails to fill the gap between the first mortgage and the purchase price, a second or junior mortgage may be employed. The most common arrangement is for the seller to accept the second mortgage as part payment.

Owners of used houses, both individuals and institutions, frequently sell their properties under land contract. Since title remains in the seller under this arrangement and repossession may be readily accomplished, he is usually willing to accept as small a down payment as 10 per cent and to grant liberal terms of repayment. If the property is already mortgaged this encumbrance remains undisturbed, and the seller will normally meet the debt service on the mortgage out of the proceeds of the land contract. It is frequently provided in the land contract that, when the debt has been paid down to a certain amount (which represents a conservative percentage of the total value of the property) or when the principal amount due under the land contract has been reduced to an amount equal to an underlying mortgage, title will be conveyed to the buyer. At that time the seller will either take back a purchase-money mortgage covering the unpaid balance of the purchase price, or, where the property is already mortgaged, the buyer will assume this obligation. The land-contract device is sometimes used to finance the purchase of new houses, but at the present time it is more frequently employed in connection with existing houses.

Financing Construction. In the case of a prospective home owner who contracts with a builder for the construction of a new house, one of two situations may exist. If the builder owns the land he may use his own credit to finance the project during the construction period and turn it over to the buyer at completion. In this case the problem of financing would be the same as in the case of a new house sold after completion. Where the prospective home owner owns the land or where the builder owns the land but cannot secure sufficient working capital on his own credit, it is usually necessary that the home owner participate in the financing of the construction process. At the start of the building operation a construction loan is arranged to provide for the contractor's cash needs. This loan may be secured by a mortgage given to the same institution that is to undertake the permanent financing, or another institution may provide the short-term construction money. The soundest practice requires that the owner deposit with the institution that part of his equity or purchase price which is represented by cash. As the construction proceeds the contractor presents evidence of expenditure on the job either in the form of receipted bills or waivers of lien from building workers and material suppliers. Upon presentation of this evidence, the bank makes a payment first from the owner's equity and

then from the proceeds of the loan in an amount which is something less than the total of the contractor's expenditure. As the contractor needs additional cash this process is repeated until the payment of the final installment after the completion of the structure and an inspection by the lending institution. At this time the construction mortgage is replaced by a permanent mortgage. It is possible to arrange the financing so that only one mortgage transaction is required for both the construction credit and the permanent advance; in effect, the proceeds of the permanent loan are simply paid in installments over the period of construction.

Ground-rent Financing. In a few localities in this country, particularly in Pennsylvania and Maryland, long-term leases are employed in home financing. This device, popularly termed the "ground rent system," is the heritage of prerevolutionary times. The scheme consists of a long-term lease, renewable forever, giving possession of the land to the prospective home owner in return for a yearly rental. In effect, therefore, the home owner receives an advance in the form of land with no obligation to repay a capital sum. He is able to mortgage his leasehold estate in order to secure funds for construction. It is a common practice to require the borrower to make monthly payments to the lending institution in an amount equal to both the debt service and the ground rent. The institution then is assured that the obligations of the lease, which is a lien prior to the mortgage, will be met. There are legal differences between the ground-rent systems in Maryland and in Pennsylvania, but in both states the device is used in the same manner in home financing. In both states the law now provides that at the option of the tenant with due notice the ground rent can be redeemed by the payment to the landlord of a sum equal to the capitalization of the rent reserved. In cases of the sale of an existing home property encumbered by a ground lease the buyer simply assumes the seller's obligations under the arrangement.

Refinancing. The refinancing of a home may involve the recasting of an existing loan or the retirement of an existing loan out of the proceeds of a new loan. The occasion for refinancing arises when interest rates are falling or when the borrower seeks a change in the terms of repayment in order to meet a change in his financial situation. Refinancing may occur when a buyer seeks to secure legal title to his home by replacing a land contract with a mortgage.

Lending Terms. Those provisions of instruments of real estate finance which express the financial arrangements between the borrower and the lender are referred to as the "terms" of the contract. The terms represent the result of a process of bargaining wherein the lender seeks to

maximize the safety of his principal and to assure himself of the debt service payments and wherein the borrower attempts to adjust the financial burden to his means and convenience. The contract terms of a loan on real estate include an agreement as to the principal amount, the interest rate, and the time schedule of debt services payments of both principal and interest.

The principal amount of an advance secured by real estate is related to the value and quality of the property that stands as collateral, the needs of the borrower, his credit standing, the lending policy of the institution, and the general nature of the transaction—that is, whether the loan is on a new house or used house, whether it is secured by a first lien, or whether or not it is a purchase-money mortgage. In general the amount of the loan is geared to the appraised value of the property and is limited to some maximum proportion of total value as determined either by the practice of the institution or by statutory limitations. FHA insured loans may go to 80 and 90 per cent of the property value. Some savings and loan associations and insurance companies approach these levels on uninsured mortgages. Advances under the land-contract arrangement or advances secured by purchase-money mortgages are generally liberal. Where provision is made for the rapid retirement of the debt there is a tendency to make larger advances.

The interest rate on loans secured by real estate is the product of forces currently operating in the money market. Interest rates change slowly and are not likely to vary substantially among lending institutions in any one community. Although the interest rate is one of the most inflexible parts of standard loan contracts, there is some tendency to reduce the rate on conservative loans. The actual cost of the money to the borrower, or the effective interest rate, is sometimes higher than the contract interest rate because of fees or service charges made by lending institutions at the time the loan is placed. However, in recent years the competition among lending institutions for home loans has resulted in the virtual disappearance of those initial fees charged to the borrower which do not represent direct costs; even some of these items, such as the appraisal cost, are often absorbed by the lending agencies.

Real estate loans may be classified on the basis of the provisions for amortization. In some cases no amortization is required during the life of the loan and the loan becomes due and payable in full at the end of its term. In other cases partial amortization is required, with the unpaid balance due and payable at termination. The most popular type of loan in the current market requires complete amortization in monthly installments. The term of the loan is adjusted to the amortization provisions; thus loans that are not amortized or only partially amortized

generally have a shorter term than those which are fully amortized. Loan contracts may require annual debt service payments of interest or principal and interest, semiannual payments, quarterly payments, or monthly payments. At the present time contracts covering conservative loans may provide for less than complete amortization and are likely to call for semiannual or annual debt service payments. In New England many loans are written for terms of from 2 to 5 years with no provision for amortization and with the understanding that they will be renewed. It is generally the case that unamortized loans are written for short terms. The currently popular high-percentage loans are long term, from 12 to 25 years, and call for monthly debt service payments that completely retire the loan. Land contracts are often written on similar terms. Second mortgages and other junior liens generally call for rapid amortization with higher interest rates reflecting the greater risk.

The spread of the loan contract calling for monthly amortization and running until the debt is retired has been a great advance in home financing over the last 25 years. Savings and loan associations have long employed this form of contract. Its use was expanded further by the Home Owners' Loan Corporation in the refinancing of distress loans during the depression of the thirties. The FHA widely extended the plan through its operations beginning in 1934. Insurance companies and other lending institutions now use the monthly amortization plan to a considerable extent.

It is a feature of the FHA plan, now widely adopted, to require that the borrower deposit one-twelfth of his estimated annual property tax and hazard insurance premium with the lending institution each month so that the cash will be on hand to meet these charges when they come due.¹¹ Other variations that are beginning to appear include provision for the lapsing of a limited number of principal installments where the borrower is in need of financial relief and where the loan has reached some stated stage in life without delinquency. Another scheme calls for blanketing in the household mechanical equipment under the mortgage with the effect that the range and refrigerator and other items are financed over a long term along with the house purchase.

Loan Servicing. The functions of real estate loan agencies are not confined to the conversion of investment funds into mortgages. Once the loans have been placed, it is necessary that accounts must be set up and maintained, collections made, and delinquencies followed up. It is

¹¹ The 1940 Census of the United States reported that about 20 per cent of outstanding loans in 1940 on one-family owner-occupied homes had this feature. See *Housing*, vol. IV, Table X.

essential to see that property taxes are paid and that the collateral properties are adequately protected by insurance. Properties are often inspected from time to time during the life of the loan to determine whether or not they are being properly maintained, so that no unusual depreciation in value may weaken the security of the loans. Finally, should the loans become hopelessly delinquent, foreclosure must be instituted, the properties repossessed, usually renovated, and liquidated through rental or sale. All these operations, which follow the selection and closing of the loan, are commonly included in the connotation of the term "loan servicing."

Among the several functions involved in the servicing of loans, those procedures arising in connection with delinquency are most significant. Here the requirements are more than mechanical, for skillful collection practice will save many a loan from foreclosure and loss to the lender. Again, in the handling of acquired properties, wise management can substantially reduce losses. The monthly amortized long-term loan, which has gained such widespread popularity, creates greater bookkeeping and collection costs than the shorter term loans with semiannual or annual payment dates. However, this increase in expense is more than offset by the reduction in delinquencies and foreclosures, which is the product of the greater suitability of the monthly payment plan to the convenience and financial capacities of borrowers.

Pattern of Mortgage Lending. The 1940 census provides some interesting information on the incidence and characteristics of mortgage loans used in home financing in the prewar era.¹² In 1940, 45.3 per cent of all owner-occupied nonfarm homes were mortgaged as compared with 39.8 per cent in 1920 and still smaller proportions for earlier years. Mortgages were most frequently encountered in the larger cities, for the per cent mortgaged in metropolitan districts was 56.9 compared with 33.2 outside metropolitan districts. Only 26.6 per cent of the rural nonfarm homes were mortgaged. The average outstanding debt on one-family nonfarm homes was about \$2,300, which represented 52 per cent of the property value.

The average interest rate on mortgages secured by one-family owner-occupied nonfarm homes was 5.55 per cent. Of this group, 20 per cent reported an interest rate falling between 4 and 5 per cent, an additional 27 per cent paid between 5 and 6 per cent, and 45 per cent paid exactly 6 per cent. Thus only 8 per cent of the mortgages called for more than 6 per cent interest. Regional differences in interest rates are evi-

¹² The mortgage data are summarized for the United States in *Housing*, vol. IV, "Mortgages on Owner-occupied Non-farm Homes," 16th Census of the United States (Washington, D.C.: U.S. Government Printing Office, 1943).

dent. The lowest average rate is found in New England, 5.38 per cent; the highest in the West South Central region, 5.97 per cent.

Individual lenders held 25 per cent of all mortgages on one- to four-family owner-occupied nonfarm homes; building and loan associations were mortgagees in 20 per cent of the cases. Commercial banks, savings banks, and the HOLC were reported at 11 to 13 per cent for each category, and life insurance companies and mortgage companies each held about 4 per cent of the loans.

About 80 per cent of the outstanding mortgage contracts called for some principal payments. Two-thirds of all mortgages required monthly payments; 5 per cent of the loans called for semiannual payments and 3 per cent for quarterly payments; 2 per cent provided for annual payments. About 14 per cent of all loans required no reduction of principal.

Available data on the mortgage status of rented dwellings are very limited. The Financial Survey of Urban Housing enumerated in 1934 revealed that in the sample of cities covered by the survey, 56.2 per cent of the owner-occupied homes were mortgaged as compared with 39.8 per cent for rented dwellings. Classified by type of structure, the proportion of rented dwellings mortgaged was as follows:¹³

<i>Type of Structure</i>	<i>Per Cent</i>
All rented dwellings	39.8
One-family	36.8
Two-family	44.1
Apartments	61.0
Other dwellings	49.0

The total mortgage debt for the United States was estimated at 28 billion dollars. Of this total, the mortgage debt on owner-occupied homes was 13.2 billion dollars or 50.7 per cent, and the debt on rented dwellings was 12.9 billion dollars or 49.3 per cent.¹⁴

Mortgage Risk Analysis. Because the financing of ownership is such an important catalyst in the real estate market, it will be well to understand the processes and considerations that are involved in the investment decisions of lenders. The techniques of mortgage risk analysis were crude and unrefined up to the time of the development of the FHA Mortgage Risk Rating System. The common practice had been to measure risk primarily by the relationship between the present appraised value of the collateral and the amount of the loan. Thus risk was assumed to be proportionate to the original margin of safety repre-

¹³ Wickens, D. L., *Residential Real Estate* (New York: National Bureau of Economic Research, Inc., 1941), p. 215, Table D9.

¹⁴ *Ibid.*, p. 205, Table D4.

sented by the excess of value over debt. A loan with a low debt-value ratio was considered a prime security, since only a substantial decline in market value would result in loss of principal in case of foreclosure. This emphasis is still widespread among mortgage lenders, who fail to understand the limitations of the debt-value test of mortgage risk.

Advanced mortgage lending practice gives greater emphasis to the ability and willingness of the borrower to meet the terms of the contract. Lenders are as much concerned with the prevention of delinquency as with the assurance of a full recovery of capital through foreclosure. Thus the relationship between the monthly burden of debt service and the income prospects of the mortgagor takes on primary significance. This relationship must be analyzed in the light of other housing costs and all other financial obligations of the borrower. Mortgage contracts that are not well adjusted to the borrower's financial capacities are recognized as undesirable risks.

Another refinement of past lending practice is based on a recognition of the fact that the degree of protection afforded by the collateral, the mortgaged property, is not adequately measured by the simple relationship of debt to value at the time when the loan is made. Since foreclosure may come at any time during the life of the loan, it is the pattern of the property value in relation to the pattern of the debt over time that must be evaluated. Thus mortgage analysis must include a study of the factors that may affect the future value of the collateral property. The FHA risk rating scheme calls for a rating of the characteristics of the community, the neighborhood, and the property as relevant to future market price and marketability should foreclosure and sale be necessary to protect the lender's investment.¹⁵

Financing Income Properties

Income properties include those combinations of land and improvements which are hired out for a rental payment or which are occupied as business premises by the commercial and industrial concerns that hold title. Retail structures, office buildings, factories, and all kinds of special-purpose income-producing properties are included in this category. Among residential structures, flats and apartment buildings are classed as income properties as well as single-family structures that are rented. Since single-family structures move readily between owner occupancy and tenant occupancy, such properties are not a pure type. In practice, their financing is handled in much the same fashion whether the bor-

¹⁵ See the Underwriting Manual of the FHA for a complete procedure for mortgage risk analysis. (FHA Form 2049 Revised January, 1947. Can be purchased from Superintendent of Documents, U.S. Government Printing Office.)

rower is to be the occupant or the landlord. Even when the borrower is the owner occupant, lenders must consider the fact that there is no assurance of his continued occupancy and that, when he vacates the property, for whatever reason, it will not necessarily be reoccupied by an owner. The lender, therefore, must consider the characteristics of the property as a rented unit as a potential basis for the security of his loan.

The major difference between home financing and the financing of income properties lies in the original sources of repayment. The earnings and assets of the owner occupant are looked to for debt service in the home loan with the earning capacity and asset value of the collateral property as a secondary source. In the case of income properties, the productivity of the property itself must be sufficient to pay interest and to return the capital advance to the investor.

As in the case of the home loan, the maximum amount of a loan secured by income property is a function of the appraised value. In general, the ratio of loan to value is lower than in home loans. The valuation process and the investment analysis involved in lending on income properties requires a forecast of the level and stability characteristics of the income that the property will produce. This forecast of net returns is the basis of the appraisal of the present worth of the property and the basis for predicting the probability that the income will be sufficient to meet operating expenses and debt service requirements. The forecast of net returns calls for a careful study of the many market factors that will influence rent levels, occupancy ratios, and operating expenses over the years of productive life. It is the productivity of the property as measured by net income that is the original and the ultimate security for credit advances. Default occurs only when productivity falls below a sufficient level. And in case foreclosure ensues, the market value of the collateral property when sold to recover on the defaulted loan is determined by future productivity in terms of dollar net income.

In the financing of income properties, the mortgage is the basic device for securing the debt, just as it is in home financing. For income properties the advances are, of course, much larger than for homes, and the lending transactions are more complex. With large sums at stake, more care is exercised both in the analysis of the investment risk and in the details of the transaction. Where the home mortgage contract is fairly well standardized, the loan arrangements for large properties are custom-built for each situation. For example, when the amount of the loan is too large to be secured from a single source, arrangements may

be made to split the advance into denominations appropriate to the source of the funds. The pattern of financing also may reflect the nature and degree of risk; special-purpose buildings and pioneer locations do not always provide the type of security that is acceptable for the conventional mortgage contract. Other considerations may be the presently available source of funds, the established lending policies of institutions willing to consider an advance, liquidity considerations in a changing money market, the general surplus or shortage of funds seeking investment, and the current fashions in the investment market affecting the popularity of various forms of contracts. When both lending institutions and sponsors have plenty of capital, the simple equity and mortgage pattern predominates for most types of income properties. In the cases of large projects such as apartment developments, the property is often held by a corporation and equity stock issued to the sponsors. With business prosperity, there is considerable refinancing of existing mortgages as profits are used to retire debt. In the early postwar years, conservative loans on good business properties and apartments were being made at interest rates as low as 3.5 per cent in some areas.

As building activity resumes after the restrictions of the war years, there are beginning to reappear many of the patterns of financing that have been developed in times past to meet the peculiar needs of large developments. Many of these schemes are relatively rare; some of them have income-tax advantages, while others are plans developed by speculators and promoters who have no substantial capital of their own.

Perhaps the most widely used financing plan for large buildings during the building boom of the twenties was the mortgage bond issue. Under this plan, a mortgage on the property is issued to a trustee, who holds it for the benefit of the buyers of bonds secured by the mortgage. First-, second-, and even third-mortgage bonds are issued in denominations that are adjusted to the requirements of investors. For many years mortgage bonds have been in ill repute because of the widespread losses of investors following the collapse of the building and securities boom in 1929. It was reported that in 1931 a total of 6 billion dollars in real estate mortgage bonds were outstanding, with more than 60 per cent in default.¹⁶ This percentage increased substantially during the next few years. A study of 285 real estate mortgage-bond issues in Chicago on apartments, apartment hotels, office buildings, theaters, warehouses, garages, and other buildings revealed that in 1934 all but 14 of the issues were in

¹⁶ Proceedings of the Investment Bankers Association of America (Chicago, 1937), p. 326, quoted in Hoagland, Henry E., *Real Estate Principles* (New York and London: McGraw-Hill Book Company, Inc., 1940), p. 382.

default.¹⁷ The widespread defaults in mortgage bonds are not a demonstration of the unsoundness of this type of financing, but rather a reflection of its misuse. The popularity of this form of investment encouraged the overbuilding of apartments and other forms of income properties. Prejudiced appraisals and excessive loans in relation to value were common. In many cases losses were the result of faulty trustee arrangements or poor business judgment in failing to build up reserves in good times. In some cases, the security houses that issued the mortgage bonds undertook to guarantee investors against loss; a few organizations were set up to guarantee or insure the bond issues of other companies with a premium collected to establish reserves against loss. However, both types of arrangement proved to be unsound, and when the default of mortgage-bond issues began to spread, the mortgage guaranty companies collapsed.

There are many variations that have been devised for financing real estate development. Stock issues in various combinations of common and preferred are used usually to raise only the equity funds but sometimes for the entire capital requirements. A combination of common stock and debentures may be employed with or without an underlying mortgage. Collateral trust bonds involve the depositing of a group of mortgages on various properties with a trustee and the issuing of bonds in convenient denominations. Participation mortgage certificates are secured by an undivided interest in a group of mortgages, and participation mortgage receipts are secured by an undivided interest in a single mortgage that involves too large an amount to be handled by a single lender.

Not all financing is based upon full ownership. The long-term lease is a device for lending the use of landed capital. The ground rent that is paid to the lessor for the use of the land is parallel to the interest that is paid a lender for the use of money capital. Furthermore, the leasehold estate that is held by the lessee under a long-term lease arrangement may be mortgaged in the same manner as the fee to raise capital for the improvement of the land. Leasehold mortgage bonds may be issued if smaller denominations are desired.

To attract capital into real estate development, real estate investment trusts have been created in a few instances. Investors may place funds with the trusts for reinvestment in the securities of real estate corporations. Both fixed and management trusts have been established. For the benefit of risk capital, speculative pools have been organized. Cer-

¹⁷ Koester, Genevieve, "Chicago Real Estate Bonds, 1919-1938," *Journal of Land and Public Utility Economics*, vol. XV, no. 1, pp. 49ff.

tificates of beneficial interest are sold and the proceeds invested directly in various properties. Profits are shared by the certificate holders. On a local basis, the syndicate arrangement is a common method for speculative ventures in real estate. This plan usually calls for holding the property in the name of the syndicate manager with a secret contract between him and the other syndicate members as to the distribution of profits.

In recent years there has been an extension of direct investment by large financial institutions, primarily life insurance companies, in income properties. The most publicized activity has been the erection and operation of large rental housing projects such as Parkchester and Stuyvesant Town in New York and smaller developments in Washington, D.C., and on the West Coast. This type of investment involves complete ownership by the investing organization with no funded debt. It is being encouraged by legislation in an increasing number of states, which enables insurance companies and savings banks to invest a portion of their assets in this fashion. Recent Federal legislation now offers encouragement in the form of yield insurance, which would guarantee to the investor a minimum return at all times.

Another parallel device employed by lending institutions in connection with nonresidential properties is the purchase or construction of retail and industrial buildings and the leasing of these properties to a responsible concern for a long term. For example, some of the leading mail-order houses have sold the buildings occupied by their own retail outlets to insurance companies, at the same time entering into a long lease for continuing occupancy.

Banks and insurance companies supply the first-mortgage money in by far the greatest number of cases of income-property financing, though many loans of moderate size are held by individual investors. The introduction of FHA mortgage insurance for rental housing has led to its use in much of the new rental housing produced recently; insurance companies have supplied much of the mortgage money. Mortgage-bond issues have been a rarity since the debacle of the depression, and most of the other complex financing schemes that were common in the twenties are now only occasionally encountered.

CHAPTER 9

THE HOME MORTGAGE MARKET

Now that we have examined the nature of urban land credit, the functions it performs and the forms it takes, we next turn to what is perhaps the most important real estate lending activity—the extension of credit secured by homes. The home mortgage market is significant not alone as the largest segment of urban real estate financing, but also because it plays so large a role in new housing investment and thus in the provision of essential living accommodations for all the families of the nation. So important is the flow of funds into the housing market, and so important is the health of the housing market to the social and economic well-being of the country, that there has been a great deal of governmental tampering with the mortgage market through Federal legislation and statutory modifications of mortgage law. We shall see that the regulatory activity of government is a primary market factor.

Organization of the Market

The demand for urban land credit arises mainly from the needs of prospective home buyers and other investors who intend to acquire ownership of residential real estate. The investment may be in a home to be built by the investor himself, in a new property offered for sale by a builder, or in an existing property involving simply a shifting of an established investment from one owner to another. Effective demand for loan funds may also derive from the needs of owners who plan to refinance existing loans in order to secure more favorable terms or from owners who wish to raise money on the security of owned real estate for purposes that range from remodeling the property to speculation on the stock market.

Evidence of the relative importance of the several sources of housing credit demand is found in the lending activities of savings and loan associations. During the prewar years of 1940 and 1941, about one-third of all savings and loan mortgages were in connection with new home construction, about two-fifths for purchase of existing homes, about

one-sixth for refinancing, one-twentieth for repair and modernization, and the balance, less than one-tenth, for all other purposes.¹ During the war period, when the volume of home building was restricted, the proportion of loans for financing the purchase of existing houses rose to two-thirds and in 1944 and 1945, to more than seven-tenths. With construction resuming, the ratio is returning to more normal levels.

The nature of the demand for home mortgage credit and the fact that more than 3 billion dollars in new loans are made annually indicate that this kind of borrowing is widely disseminated. Among the families who attain home ownership, roughly one-half of all nonfarm families, the need for securing credit will occur at least once or twice during the lifetime of the family. Thus, though the incidence of borrowing is wide, the borrowers in credit transactions are relatively inexperienced in the mortgage market and unfamiliar with its functionaries and procedures. There is, of course, a small group of experienced borrowers made up of builders and professional real estate traders and speculators.

Another important characteristic of the demand for urban land credit is the long-term nature of the advances.² The ready assets of most home buyers are small; the need is for relatively large loans that can be repaid in small installments over a long period. In response to a need of this kind there have developed specialized credit outlets, which act as intermediaries between the original savers and the ultimate borrowers.

There has accumulated in this country a large volume of funds seeking long-term investment outlets. The prewar level was in the neighborhood of 60 billion dollars, but by 1946 the total had mounted to 134 billion dollars.³ From a net annual increase of from 2 to 4 billion dollars, which characterized the twenties and the late thirties, the increase in savings during 1944 reached 20 billion dollars. This rate of increase has declined to a level of about 9 billion dollars for 1946. The total savings as of 1946 were distributed by mediums as shown in Table 43.

The major investors in home mortgages are the savings and loan associations, the commercial and saving banks, and the life insurance companies. These institutions receive the savings of individuals and reinvest them in long-term securities. The individual saver seeks security and freedom from the problem of frequent reinvestment. Although he expects a modest interest return, the major objective of the small saver is to accumulate and preserve the principal for his old age, some future expenditure, or as a safety reserve. He does not expect to live off the

¹ *Federal Home Loan Bank Review, Statistical Supplement*, March, 1942, p. 13, Table 13.

² Discussed in the previous chapter.

³ *Federal Home Loan Bank Review*, vol. 13, no. 9, p. 265-266, June, 1947.

TABLE 43. ESTIMATED SAVINGS OF INDIVIDUALS IN SELECTED MEDIA, 1946.*

Medium	Amount, billions	Per cent
Total savings....	\$133.8	100.0
Life insurance companies .	40.4	30.2
War savings securities and U.S. savings bonds. .	33.5	25.0
Insured commercial banks ...	31.1	23.2
Mutual savings banks....	16.8	12.6
Savings and loan associations..	8.5	6.4
Postal savings....	3.4	2.5
2½% postal savings bonds .	0 08	0.1

* *Federal Home Loan Bank Review*, vol. 13, no. 9, p. 266, June, 1947.

interest return during the period of accumulation. He hopes to be able to withdraw his savings at any time in case of emergency, but he is willing to agree to the requirement for 30-day notice, knowing that it is not usually enforced except in times of general financial stress.

The institutional requirements for investment outlets are based on a fairly predictable rate of withdrawal. Thus a proper arrangement of maturities and amortization schedules in the portfolio of loans will produce a flow of repayments that is adjusted to withdrawal requirements. Life insurance companies, where withdrawals are primarily in the form of policy death benefits with policy loans of much lesser importance, can forecast cash needs with considerable precision. Another important institutional requirement is a rate of investment return high enough to reward the savers with a sufficiently attractive interest return to encourage saving, to pay the costs of operations including the making and servicing of loans, and to produce earnings on the institution's own capital. The required spread between interest paid savers and interest charged to borrowers tends to vary for different types of loan. For example, mortgages calling for monthly amortization are more costly to service than straight term loans.

A mortgage-lending institution may be likened to a plenum chamber or a storage dam, for it receives a flow of savings seeking long-term investment and adjusts the outward distribution of long-term credit to the needs and requirements of borrowers. This discussion has not included the individuals who advance credit on the security of homes.

While there is a substantial proportion of all mortgages held by individuals rather than institutions, the majority of such loans are purchase-money mortgages, *i.e.*, obligations of the vendee that are accepted by the vendor in part payment for the property. Similarly, there is a large volume of land contracts outstanding that originated in connection with home purchase.

It is not appropriate in this volume to undertake a discussion of the money market and the broad problems of investment, but it should be made clear that the home mortgage market is but a segment of this broader market and that the mortgage market forms an essential link between the general investment market and the housing market. Housing credit demands must compete with the needs in other areas of investment and in the end, with the multitudinous array of goods and services that tempt the earners to consume rather than to save. In the present money market, with an excess of savings seeking investment, the savers rather than the borrowers are in competition, a competition that has resulted in low interest rates and more liberal terms of repayment.

The home mortgage market is not the perfect market of classical economics, for there are numerous rigidities that hamper its self-regulating mechanisms. It is true that the mortgage is a fairly well-standardized item; though the exact terms of each loan are adjusted to the circumstances, the rights and duties of the parties as expressed in the legal instrument are substantially uniform. Even the more unsophisticated borrowers have a working knowledge of the responsibilities that they are undertaking and of the practical effects of default. On the other hand, there exists a considerable degree of public regulation of the institutions that are the major investors in mortgages—the banks, savings and loan associations, and the life insurance companies. Among the Federal agencies in the mortgage field, the Federal Housing Administration has extended its influence sufficiently to exercise effective control of interest rates, at least in terms of upper limits. The FHA and the Home Owners' Loan Corporation have also contributed to the standardization of the mortgage and to the spread of the monthly amortization plan. In so far as the FHA has led to more rational methods of mortgage risk analysis, it may be said to have made the market more "perfect."

It is a peculiarity of the mortgage market that interest rates, which stand as the ostensible price of mortgage money, are unusually sluggish in movement and that competition in the market takes on a much more complex form than simple price bidding. The fact that in 1940 the contract interest rate of exactly 6 per cent was found in 45 per cent of all home mortgages is indicative of the role that custom and tradition play

in interest rate determination.⁴ Lenders are accustomed to make adjustments to changing market conditions by varying all the terms and conditions of the loan. For example, when there is a surplus of loan funds, competition often takes the form of overappraisal of the value of the collateral property, thus permitting the lender to offer a larger loan amount without going beyond statutory limits. Amortization arrangements may be liberalized and the length of the contract term may be varied. One evidence of an oversupply of funds in the market is the disappearance of the fees and discounts that are normally loaded on the borrower in connection with the loan transaction. It is true that interest rates are not constant and that they do finally, if sluggishly, react to changes in the demand-supply relationship. Furthermore, the contract interest rate will vary from the effective rate if discounts and fees are charged, so that the advertised and recorded rates do not reflect the true price situation.

Another interesting aspect of this subject on which only speculation is possible is the influence of mortgage interest rates on the flow of individual savings into home loans. There is some basis for arguing that, within rather wide limits, interest rates play a minor role. Certainly under the postwar circumstances of excess savings, the savers appear to have been little influenced by the rates on savings accounts and mediums of various kinds. The recency of the great depression of the thirties and the fear of a recurrence have placed emphasis on security rather than rate of return. Finally, changes in the level and distribution of income and the general price level are far more important in determining the availability of funds for long-term investment. The cheap-money policy of the Federal government will ensure low mortgage interest rates for some time to come through the interposition of governmental credit where necessary to provide a sufficiency of mortgage money.

Though the rate of deposit of individual savings may not be greatly influenced by changes in mortgage interest rates, it must be recognized that institutional investment policy is sensitive to changes in the return on all forms of legal investments. Thus in early 1948 a tightening occurred in the supply of mortgage credit when a decline in bond prices made possible a yield that was more attractive to many institutional investors than the return on FHA or Veterans' Administration guaranteed mortgages.

Mortgage Lenders

The discussion of the organization of the home mortgage market has touched upon the structure of the market, the underlying market process,

⁴ U.S. Census, 1940, *Housing*, vol. IV, part I, p. 10, Table A-5.

and the characteristics of the demand for credit. We shall now turn to a more detailed consideration of the primary outlets of mortgage money.

It has been estimated that in 1930 the total outstanding debt secured by urban real estate was about 37 billion dollars, of which 22 billion dollars or about 60 per cent was represented by loans on urban homes.⁵ In 1912 the estimated urban real estate debt was 7 billion dollars and by 1922 the debt had increased to 15 billion dollars. By 1934 the total urban realty debt had dropped to approximately 18 billion dollars, with home mortgages representing 12,700 million dollars, or approximately 58 per cent. In 1946, urban real estate debt was at a level of about 31 billion dollars and mortgages on one- to four-family homes were nearly 20 billion dollars or about two-thirds.⁶

Table 44 traces the history of outstanding home loans since 1925. The rise in home mortgage debt during the boom period of the twenties was very rapid. In 1925 the estimated balance of outstanding mortgage loans was 13,200 million dollars and by 1930 this total had increased to 21,260 million dollars. The debt secured by urban homes reached a prewar peak in 1941 of an estimated 20 billion dollars, after a decline to 17 billion dollars during the depression years.

The present distribution of mortgage holdings among various types of lenders is indicated in the table. Savings and loan associations hold 29 per cent of the outstanding loans, and commercial banks, with 16 per cent of the total, stand next in importance among the institutional lenders. Insurance companies and mutual savings banks hold 11 per cent each, while the HOLC accounts for less than 3 per cent. Individuals and miscellaneous holders have advanced 31 per cent of the outstanding loans. This category is not very illuminating, since it contains a wide variety of holders of unexpressed relative importance. Individual holders are by far the most important group, for according to the 1940 housing census they accounted for 25 per cent of the total home mortgage debt of that year.⁷

The distribution of the outstanding mortgage debt among various types of lenders is not necessarily representative of the present importance of these lenders in the mortgage market. The data representing sources of new mortgage money are more significant. At the present time new mortgages on urban homes are being made at the rate of approximately 800 million dollars per month, representing some 200,000 loans. On the

⁵ Horton, Donald C., *Long Term Debt in the United States* (Washington, D.C.: U.S. Department of Commerce, 1937), pp. 136 and 139.

⁶ *Federal Home Loan Bank Review*, vol. 13, no. 2, p. 47, November, 1946.

⁷ U.S. Census, 1940, *Housing*, vol. IV, part I, p. 4, Table IX.

TABLE 44. ESTIMATED BALANCE OF OUTSTANDING MORTGAGE LOANS ON ONE- TO FOUR-FAMILY NONFARM HOMES *
(millions of dollars)

Year	Savings and loan associa- tions	Insur- ance com- panies	Mutual savings banks	Commer- cial banks	Home Owners' Loan Cor- poration	Indi- viduals and others †	Total
1925	\$4,204	\$ 837	\$2,375	\$ 800	...	\$5,000	\$13,216
1926	4,810	1,062	2,650	1,250	..	5,500	15,272
1927	5,488	1,254	2,900	1,850	. ...	6,000	17,492
1928	6,060	1,445	3,125	2,375	...	6,600	19,605
1929	6,507	1,626	3,225	2,500	....	7,200	21,058
1930	6,402	1,732	3,300	2,425	..	7,400	21,259
1931	5,890	1,775	3,375	2,145	.....	7,500	20,685
1932	5,148	1,724	3,375	1,995	.....	7,000	19,242
1933	4,437	1,599	3,200	1,810	\$ 132	6,700	17,878
1934	3,710	1,379	3,000	1,189	2,379	6,200	17,857
1935	3,293	1,281	2,850	1,189	2,897	6,000	17,510
1936	3,237	1,245	2,750	1,230	2,763	6,000	17,225
1937	3,420	1,246	2,700	1,400	2,398	6,180	17,344
1938	3,555	1,320	2,670	1,600	2,169	6,332	17,646
1939	3,758	1,490	2,680	1,810	2,038	6,440	18,216
1940	4,084	1,758	2,700	2,095	1,956	6,510	19,103
1941	4,552	1,976	2,730	2,470	1,777	6,590	20,095
1942	4,556	2,255	2,700	2,480	1,567	6,350	19,908
1943	4,584	2,410	2,660	2,450	1,338	6,100	19,542
1944	4,799	2,458	2,570	2,410	1,091	6,200	19,528
1945	5,376	2,258	2,530	2,575	852	6,400	19,991
1946	7,200 ‡	2,645 ‡	2,680	3,900	636	7,500	24,561

* *Federal Home Loan Bank Review, Statistical Supplement*, 1947, p. 14, Table 14. For a detailed description of the source of these estimates see *Federal Home Loan Bank Review*, November, 1939, p. 51, and September, 1940, p. 410. The table reflects a revision of previous estimates for savings and loan associations. The revised figures include only operating institutions and exclude the estimated amount of mortgage loans against which the borrowers had pledged shares that, in reality, are an offsetting item reducing the borrower's indebtedness. This revision was made possible by a recent estimate of the volume of such pledged shares for the period covered in the table. HOLC holdings for 1933 and 1934 were revised to conform with the corporation's accounting records.

† Includes fiduciaries, trust departments of commercial banks, real estate bond companies, title and mortgage companies, philanthropic and educational institutions, fraternal organizations, construction companies, Reconstruction Finance Corporation Mortgage Company, etc.

‡ Preliminary.

basis of the dollar volume of new loans in 1946 the relative importance of various types of lenders is shown by the following tabulation.⁸

<i>Type of Lender</i>	<i>Per Cent</i>
Savings and loan associations ..	37 9
Insurance companies . . .	5.2
Banks and trust companies .	23 3
Mutual savings banks . . .	5 0
Individuals and others . .	28.6
	<u>100.0</u>

Individuals. Individuals hold about one-quarter of all urban home mortgages. Before the depression of the thirties, mortgages on homes were considered a prime investment and provided an important outlet for the cash savings of many individuals. In many cases the loans were negotiated directly between the investor and the borrower, though in the large communities it was customary to buy mortgages from banks or mortgage companies, who either assigned loans that were in their portfolios or acted as brokers in negotiating the advance. This practice has become somewhat less common following the depression partly because mortgages as investments have lost some of their prestige and popularity among individuals and in part because of the rise of the FHA insured mortgage, which may not be purchased by individuals. In recent years, there seems to have been some revival of direct investment and mortgage purchase by individuals.

Individuals who buy mortgages generally prefer conservative loans representing 50 to 60 per cent of the appraised value of the property. Investors of this kind are in search of security and permanence. Having no facilities for servicing loans they may not wish to be bothered by monthly payments and often prefer loans with terms of moderate length, from 5 to 10 years, which provide for partial amortization or no amortization and which call for annual or semiannual debt service payments. However, land contracts or mortgages that represent a high proportion of the property value are likely to call for monthly amortization.

Individual holdings of real estate securities may be created under other circumstances than by direct lending or mortgage purchase. A large share of such holdings is undoubtedly in the form of purchase-money mortgages. Such advances do not represent the investment of cash savings but are created from equities held by sellers. The majority of loans are on existing houses, either purchase-money mortgages or conservative loans written in connection with a sale or with refinancing. In

⁸ *Federal Home Loan Bank Review, Statistical Supplement, 1947, p. 14, Table 14.*

addition to first mortgages held by individuals there are outstanding large volumes of purchase-money second mortgages and land contracts employed in financing the sale of homes. Some of the more speculative-minded investors engage in the purchase at discounts of second mortgages and land contracts.

Savings and Loan Associations. Savings and loan associations are the most important source of credit for home ownership in both England and the United States. The origins of the savings and loan plan are found in the English building societies of a century and a half ago. The first adaptation in this country appeared in Pennsylvania in 1831. The nature of the early form of the institution does much to explain the general character and policies of the modern association, though considerable changes have been made. The early groups were composed of a few individuals who possessed an urge to own homes of their own and who entered into a mutual agreement to pool their savings. As sufficient sums were accumulated, loans were made to members of the group for the purchase or erection of homes. When the last member had been accommodated, the arrangement was terminated and the association dissolved. From this modest beginning the modern savings and loan plan has evolved, retaining the original objectives but with refinements in method, which extend its usefulness. The present plan provides for a permanent institution accepting new members at any time. Membership is attained by the subscription to shares in the association to be paid for in monthly installments or by the outright purchase of fully paid shares. There is no requirement that members must borrow from the association, nor is borrowing limited to members. Thus the depository and lending functions are separated, and the organization now operates in a general way like a savings bank—receiving deposits from one group and lending to another. The shareholder is privileged to withdraw his accumulated payments at any time with due notice, usually 30 or 60 days. As a practical matter, associations make a practice of permitting withdrawal on demand except under unusual circumstances.⁹

Until recent years, associations generally employed the so-called "share-accumulation plan," under which the borrower subscribes for installment shares of the association in an amount equal to the face of the loan. The mortgage remains fixed in amount with interest falling due regularly until such time as the accumulation of the borrower's payments and the dividends paid by the association is equal to the

⁹ Bodfish, Morton, and A. D. Theobald, *Savings and Loan Principles* (New York: Prentice-Hall, Inc., 1938), Chap. 2.

debt. The mortgage is then canceled against the shares.¹⁰ The major weakness of the plan appeared during the depression, when the earnings of many associations declined so that dividend payments were reduced or suspended and the period of repayment on existing loans was consequently extended. Where associations failed, the borrowers found themselves with the full amount of the loan still standing as unpaid on the books of the association and with the accumulation of their payments and of dividends represented by installment shares of questionable value.

Because of the unfortunate depression experience, the share-accumulation plan has lost favor and has been widely replaced by the direct-reduction plan. This device parallels that used by other lending institutions, wherein each principal payment is applied immediately to reduce the debt. A scheme that stands between the two types already described is the cancel-and-endorse plan. Under this arrangement, the borrower subscribes to shares in the amount of the loan, and his payments are applied to a single share of \$100 until it is fully paid. The share is then canceled and a principal payment of \$100 endorsed on the mortgage note, reducing the unpaid balance by that amount.

The investment policy of savings and loan associations reflects their origin. In general they have adhered to the original objective of providing credit for home acquisition. Loans on modest single-family structures predominate, although other types of property are occasionally accepted as security. Owner-occupied homes are preferred above all other types of collateral, with two- and three-family buildings next in rank.¹¹ Mortgages secured by apartment buildings and commercial properties are uncommon in association portfolios, and loans on vacant land are rare. The policy of associations varies in the acceptability of various types of property and is limited by legal restrictions, which differ somewhat among the states. In 1941, first-mortgage loans were 80 per cent of all assets held by operating savings and loan associations; this ratio dropped during the war to 63 per cent in 1945.¹²

Savings and loan associations have pioneered in the use of the long-term loan contract calling for equal monthly payments and for full amortization. A widely used plan, which was standard in many associations in the twenties, provided for monthly debt service payments of 1 per cent of the principal amount of the loan. Monthly payments covered both interest and principal retirement. Under this arrangement the loan was retired in about 11 years. In recent years monthly payments

¹⁰ *Ibid.*, p. 179.

¹¹ *Ibid.*, p. 194.

¹² *Federal Home Loan Bank Review*, November, 1946, p. 42.

often include one-twelfth of the annual property tax and hazard insurance premium. This part of the payment is held in trust by the association and applied as the obligations fall due.

The maximum loan-value ratio of 66½ per cent traditionally adhered to by savings and loan associations has been liberalized. In the pre-depression era, the two-thirds basis was more liberal than the limits enforced by other lenders. Banks and insurance companies rarely went beyond loans of 50 to 60 per cent of value. The present widespread use of the 80 and 90 per cent loan insured by the FHA has led to a reluctant extension of the limit by savings and loan associations as well as by other lenders. Loans of 70 and 75 per cent made without benefit of mortgage insurance are now placed by many associations. Insured loans of 80 and 90 per cent are also common, although many association managers feel that such high percentages are unsound and refuse to extend the normal limit even under the protection of FHA ¹³

The FHA has also made itself felt in bringing about an extension of the length of the loan term. Before 1930, the typical term of savings and loan association mortgages was between 10 and 11 years. Recent trends are in the direction of extending the term to 12 and 15 years, with some associations making 20-year uninsured loans. FHA-insured mortgages are made for terms of up to 30 years.

Savings and loan interest rates have been traditionally higher than the rates of other lending institutions.¹⁴ To a considerable extent the higher rate is a reflection of the more liberal terms—the higher loan-to-value ratio and the longer term of loan—which were presumed to create a greater investment risk. Another factor was the generous returns paid to depositors in the form of dividends. In a market in which the competition among investment mediums was strong, high returns were assumed to be necessary to attract money. In the post-depression years, characterized by a surplus of funds, savings and loan associations have generally been forced to meet the market with respect to interest rates. Their advantage in the form of more liberal terms no longer obtains. Furthermore, the popularity of the FHA plan has led them to fall in with the general standardization of rates at the FHA maximum. A few associations offer variable interest rates, which are adjusted to the risk

¹³ See the Report of the Committee on Trends of the United States Building and Loan League, October, 1937 (Chicago: United States Building and Loan League).

¹⁴ Wickens, David L., *Residential Real Estate* (New York: National Bureau of Economic Research, Inc., 1941), pp. 256, 262. See also U.S. Census, 1940, *Housing*, vol. IV, part I, p. 13, Table A-9, which shows building and loan association mortgages with an average loan rate of 5.92 per cent compared with 5.55 per cent for all mortgages.

of the loan measured in terms of the loan-value ratio, the quality of the collateral, and the moral risk.¹⁵

In most states there is provision for state chartering and regulation of savings and loan associations. Wide variations exist among states in the effectiveness of regulation. The duties of regulatory bodies involve the chartering of new associations, the examination of the books of operating associations, and, in case of insolvency, the safeguarding of the interests of investors and creditors. The establishment of the Federal Savings and Loan system in 1933 created an additional regulatory body concerned exclusively with federally chartered associations. The Federal Home Loan Bank Board is authorized to examine Federal associations as well as all associations, state and Federal, which are insured by the Federal Savings and Loan Insurance Corporation.¹⁶

The major growth in the number and importance of savings and loan associations came in the present century. During the first 20 years the number of associations increased steadily from 5,356 to 8,633 with resources of 2.5 billion dollars. Between 1920 and 1930 resources increased by 250 per cent to nearly 9 billion dollars in 11,777 institutions. It was estimated that about 16 per cent of the total savings of the nation were in the hands of savings and loan associations.¹⁷ The geographical spread of associations was not uniform during this period of expansion. There was a mushroom growth in New Jersey, Pennsylvania, and Ohio. It is said that in Philadelphia there were more than 3,000 associations.¹⁸ The rapid expansion during the twenties reflected the needs for credit facilities created by the building boom; and in areas where existing institutions were adequate, the growth was not so rapid.

The unsoundness of much of the growth in savings and loan associations was demonstrated by the depression experience in the thirties. Along with other types of financial institutions heavily involved in real estate mortgages, they failed in large numbers.¹⁹ To a considerable extent the failures may be charged to the small size of the institutions, the excessive numbers of them in many communities, and to the lack of skill in management on the part of part-time managers or poorly paid, mediocre managerial talent. By 1936, the number of associations had decreased to 9,663 through failures and consolidations and total assets were

¹⁵ Bodfish and Theobald, *op. cit.*, p. 207.

¹⁶ The Federal Home Loan Bank Board and the Federal Savings and Loan Insurance Corporation are discussed more fully at a later point in this chapter.

¹⁷ Bodfish and Theobald, *op. cit.*, pp. 58, 59.

¹⁸ Hoagland, Henry E., *Real Estate Principles* (New York: McGraw-Hill Book Company, Inc., 1940), p. 375.

¹⁹ For data on failures and losses, see *Savings and Loan Annals*, p. 486, Table 6.

5.7 billion dollars.²⁰ By 1946 there were 6,100 associations with assets of 10 billion dollars and accounting for nearly 40 per cent of all new mortgages.

Savings and loan associations are relatively small in size as financial institutions. Of the total of more than 8,000 associations in 1938 only 136 had assets in excess of 5 million dollars and only 40 were above 10 million dollars.²¹ Average assets of members of the Federal Home Loan Bank System were reported to be about a million dollars in 1939 as compared to 400 thousand dollars for nonmembers.²² By 1946, the average assets of members had increased to 2.7 million dollars. The size distribution of members in 1939 is given in Table 45.

TABLE 45. SIZE DISTRIBUTION OF SAVINGS AND LOAN ASSOCIATIONS, 1939 *

Asset size groups	Number of associations	Per cent of total
\$0-100,000.	271	7.0
100,000-250,000. . .	874	22.6
250,000-500,000 . . .	882	22.8
500,000-1,000,000 . . .	785	20.3
1,000,000-2,500,000. . .	682	17.7
2,500,000-5,000,000. . .	239	6.2
\$5,000,000 and over. . .	132	3.4
Total.	3,865	100.0

* *Eighth Annual Report of Federal Home Loan Bank Board*, p. 184, Exhibit 14.

The small size and local character of the institutions give the advantage of assuring close contacts between borrowers and the lending officers as well as familiarity with the local real estate market. A disadvantage lies in the inability to pay for skilled management. Furthermore, as investment institutions savings and loan associations possess a certain vulnerability as a result of small resources and lack of diversification of investments.

The mutual character of savings and loan associations has been gradually vanishing as the institution has developed. The depositors no longer are concerned with the identity of the borrower so long as his credit standing is acceptable. The extension of the direct-reduction plan of

²⁰ Hoagland, *op. cit.*

²¹ *Savings and Loan Annals*, p. 494.

²² *Eighth Annual Report of Federal Home Loan Bank Board*, p. 58, 1940.

repayment has eliminated all but a meaningless technical membership in the association on the part of the borrower. The management in all but the smaller associations has been taken over by the secretariat and a self-perpetuating board of directors, and the depositors, though possessed of voting power, actually do not participate in policy determination.

Banks and Trust Companies. Traditional banking investment policy requires that only a limited portion of the funds employed in commercial banking should be invested in long-term nonliquid securities such as home mortgages because of the demand nature of commercial deposits. However, commercial banks accept in considerable amount time deposits and savings deposits, which may be appropriately converted into real estate loans. Of a similar nature are the funds of savings banks and trust companies or trust departments of commercial banks. Mutual savings banks will be considered in another section.

During the decade of the twenties, banks and trust companies increased their holdings of real estate loans until the aggregate holdings had risen from 4.9 per cent of total assets to 8.0.²³ This trend reflected the relatively high return obtainable and the wide field for investment in mortgages, which was a concomitant of the building boom. This development in investment practice undoubtedly contributed to the difficulties in which banks became embroiled in the depression years. It appears that the responsibility for the trouble lay not so much in the investment of an unsound proportion of total assets in real estate loans as in the careless and unskilled selection of loans and the failure to demand regular amortization of principal. The competition among lenders for outlets led to inflated loan appraisals and to the acceptance of risks without thorough analysis. The mortgage debacle left so bad a taste in bankers' mouths that during the recovery period they were cautious in resuming investment in real estate loans. However, the pressure of idle funds and the added security of FHA mortgage insurance has now popularized the home mortgage among banks. The ratio of urban mortgages held in total assets has risen substantially from a low point of 5.3 per cent in 1936. At the present time banks and trust companies are making more than one-fifth of all new urban home mortgages in dollar volume, aggregating over 2 billion dollars for the year 1946; and banks hold one-sixth of the total mortgage debt.²⁴

Banks and trust companies are limited by law with respect to the proportion of their assets that can be invested in real estate mortgages

²³ Kniven, Leonard, *Private Long Term Debt and Interest in the United States* (Washington, D.C., 1936).

²⁴ *Federal Home Loan Bank Review, Statistical Supplement*, 1947, p. 14, Table 14.

but rarely do they approach the limit. The restrictions on national banks limit the total mortgages of any one bank to 100 per cent of the capital and unimpaired surplus fund or to 60 per cent of the time and savings deposits, whichever is the greater. Individual loans that are not to be amortized are limited to 50 per cent of the value of the collateral property and to a term of 5 years. Amortized loans may be made up to 60 per cent and for as long as 10 years. In general, laws governing state banks are less restrictive with the result that institutions of this class customarily invest a greater share of their time deposits in mortgages than do national banks.²⁵ Since the establishment of FHA, laws have been revised to permit state and national banks to make insured loans upon any terms that are acceptable to FHA. Thus banks are now among the most active agencies in originating FHA loans. During the first decade of FHA operations, ending with 1945, state and national banks had originated nearly one-half of all FHA-insured loans under Sec. 203 and were holding about the same proportion.²⁶ The purchasing of FHA insured mortgages from the originating agency has become common practice among banks. This device is used as an outlet by country banks and institutions in cities where the real estate market and the building industry are inactive and the opportunities for placing loans are few. Purchases are made from other banks or mortgage companies, who perform what is in effect a brokerage function. This scheme is practicable only because of the acceptability of FHA insurance, based upon a thorough appraisal of mortgage risk, as a sufficient protection against loss.

There are indications that the current interest on the part of banks in mortgage investment is not a temporary policy. Improved techniques of mortgage risk analysis, mortgage insurance, and a growing body of knowledge of the causes of mortgage loss are all contributing to an increasing confidence in this form of investment. Another factor is the growing use of the monthly amortized loan, which permits flexibility in the fund conversion process to meet changing conditions.

Mutual Savings Banks. Mutual savings banks are found mainly in the New England states. They are mutual thrift institutions in form of organization, noncommercial in objective, and thoroughly hedged about by restrictive laws designed to protect the small depositors who constitute the membership. During the century ending in 1920, this form of institution grew steadily in the Eastern states until there were 630 banks with deposits of over 5 billion dollars. Because of the nature of the deposits, investments were in long-term securities and mortgages, with

²⁵ *Home Mortgage Lending* (New York: American Institute of Banking, 1938), p. 78.

²⁶ National Housing Agency, *Fourth Annual Report*, p. 122, 1945.

about 38 per cent of total assets in real estate loans.²⁷ During the twenties, mutual savings banks did not expand so rapidly as savings and loan associations, though assets increased to almost 9 billion dollars by 1929. The proportion of assets invested in mortgages had risen to 52 per cent.²⁸

The depression experience of mutual savings banks is a tribute to their soundness. In the early depression years, when confidence in other depositories was breaking down, the deposits in mutual savings banks were increasing. However, the proportion of assets invested in mortgages decreased steadily during depression and recovery until it reached 41 per cent in 1941. Since that time, the decline has continued to a level of 24 per cent in 1946.²⁹ This change in status is explained by the increased investments in government securities, the larger cash reserves, the assumption of mortgages by the HOLC, and the conversion of mortgages to real estate owned through foreclosures. In the prewar year of 1941, mutual savings banks held about 2.7 billion dollars in mortgages, or 14 per cent of the total home mortgage debt of the country. As of 1946, the proportion has dropped to 11 per cent; savings banks were originating about 6 per cent of all new mortgages, in terms of dollar volume.³⁰

The loan terms customarily employed by mutual savings banks are highly conservative. Until recently it was common practice to accept only low-ratio first mortgages due in 1 to 5 years and with no provision for amortization. The 1-year term predominated and renewal was assumed. The failure of mutual savings banks to liberalize loan terms to meet the competition of other lenders in the current mortgage market has resulted in a decline in their importance as a source of home mortgage credit.

Life Insurance Companies. Life insurance companies hold 2.6 billion dollars in home mortgages or 11 per cent of total home mortgage debt. At the present time they are originating some 5 per cent of all new mortgages.³¹ In addition they purchase substantial amounts of home mortgages from originating institutions. In 1938, home mortgages represented about 4 per cent of the admitted assets of the 26 largest legal

²⁷ Kniven, *op. cit.*

²⁸ See Kniffin, W. H., *The Savings Bank and Its Practical Work* (Cambridge, Mass.: Bankers Publishing Company, 1928), Chaps. 1 and 2; also Willis, H. P., and J. J. Bogen, *Investment Banking* (New York and London: Harper & Brothers, 1936), pp. 112-118.

²⁹ *Federal Home Loan Bank Review*, vol. 13, no. 191, p. 274, June, 1947.

³⁰ *Ibid.*, *Statistical Supplement*, 1947, p. 14, Table 14.

³¹ *Ibid.*

reserve companies in the country.³² At the end of 1945, this ratio stood at 5 per cent.³³

The investment funds of insurance companies are in the form of capital, surplus, and premium reserves. Investment mediums are restricted by the laws of the states in which the companies operate. In general, funds may be invested in United States securities, municipal bonds, corporate bonds of certain types, high-grade preferred stocks, first mortgages up to two-thirds of the value of the property, and in recent years, all FHA-insured mortgages. During the twenties the holdings of urban mortgages on all types of property increased from 1.3 billion dollars to 5.2 billion dollars, and from 17 to 30 per cent of total assets. The years of depression and recovery brought about a reversal of this trend, with nonfarm mortgages at the end of 1940 estimated at 16 per cent of total assets, or a total of 5 billion dollars. At the end of 1945, loans on one- to four-family homes totaled 2.258 billion dollars and represented 35 per cent of the entire mortgage portfolio, including farm loans.³⁴ Loans secured by multifamily dwellings amounted to 21 per cent of the mortgage portfolio, so that all urban residential loans were 56 per cent of the real estate mortgages held.³⁵

During the depression new investments in all types of urban real estate loans by life insurance companies dropped to such a low point that in 1934 only 55 million dollars or 2.6 per cent of all new investments were urban mortgages. This proportion rose with recovery until in 1940 it reached 20 per cent, representing 820 million dollars.³⁶ In 1945, new small-home loans constituted 35 per cent of all mortgages made. This ratio was smaller than in previous years and is indicative of a decreasing participation of life insurance companies in small-home financing. This trend may not be permanent. One outstanding characteristic of recent investment practice is the importance of FHA-insured mortgages. At the end of 1945, some 55 per cent of one- to four-family home loans were insured; 9 per cent of multifamily loans were insured. At that time, insurance companies held more than one-third of all FHA-insured loans on small homes and three-fifths of the insured loans on apartment projects.³⁷

³² *Investigation of Concentration of Economic Power*, Hearing before the TNEC, part 10-A, "Life Insurance" (Washington, D.C.: U.S. Government Printing Office, 1940), pp. 98, 208.

³³ *Federal Home Loan Bank Review*, October, 1946, p. 16.

³⁴ *Ibid.*, pp. 15-17.

³⁵ *Ibid.*

³⁶ *Ibid.*, May, 1941, pp. 257, 258.

³⁷ *Ibid.*, October, 1946, pp. 15-17.

Life insurance companies place loans either through branch offices or loan correspondents, who receive a commission. It was estimated that in 1939 about one-quarter of all new loans were made through correspondents or were purchased from originating institutions.³⁸ Loan terms have been liberalized in recent years to meet the competition for investments. The length of the loan term on home loans has been extended to 15 and even 20 years on uninsured loans, and monthly amortization is encouraged. Interest rates on all loans have declined from a range of from 5.30 per cent to 6.34 per cent in 1932 to a range of 3.96 per cent to 5.25 per cent in 1938. The average rate in 1940 on outstanding insurance company mortgages was 5.41 per cent as compared with the average for all lenders of 5.55 per cent.³⁹ FHA-insured loans on homes are made by more than half the companies. In some cases, insurance companies will lend at less than the FHA interest rate on conservative mortgages.

A number of large companies have made direct investments in rental housing projects; the projects are owned outright by the insurance companies and no mortgage financing is involved. The most spectacular ventures are Parkchester and Stuyvesant Town built and operated in New York City by the Metropolitan Life Insurance Company. Located in the Bronx, Parkchester provides for over 12,000 families and involves an investment of about 60 million dollars. Stuyvesant Town is being built on former slum land in the lower east side of Manhattan and will house 8,800 families, calling for an investment of more than 50 million dollars. Direct investment projects of life insurance companies both completed and projected total some 300 million dollars and are located in cities from coast to coast. Recent legislation in a number of states extends to additional insurance companies permission to undertake this type of project.

Other Lending Agencies. There are several types of lenders on home security that are of minor importance in comparison with the institutions already discussed. Among these agencies, mortgage companies are most significant. These organizations specialize in real estate credit, lending out of their own capital but placing main dependence for investment funds upon the proceeds of the sale of mortgages to other institutions. This brokerage-type operation has grown to substantial proportions in the last several years since the establishment of FHA and the more recent development of the mortgage guaranty by the VA. There has developed a broad market for insured loans among banks and life insurance companies. In addition the RFC and the Federal National Mortgage Associa-

³⁸ *Ibid.*, May, 1941, p. 258.

³⁹ U.S. Census, 1940, *Housing*, vol. IV, part I, p. 13, Table A-9.

tion, both Federal agencies, have at times purchased large quantities of FHA and VA mortgages. Mortgages that are made and sold are serviced by the mortgage companies and the revenue from the operation is in the form of a servicing fee allowed by the purchaser. Additional revenues are derived from mortgages sold at a premium.

Other sources of home mortgage credit are found in foundations or in the endowment funds of eleemosynary institutions. At least one national lumber producer has until recently provided mortgage money through a subsidiary that was established to expedite the sale of lumber by retailers by offering financing facilities to builders and home buyers. Another source of credit is a large investment trust, which sells shares to small savers and invests a large proportion of its funds in mortgages. Operative builders and contractors are important sources of credit, which take the form of second mortgages or land contracts taken back as part payment for homes built and sold. The most of these advances are relatively short term as compared with the typical mortgage. Land contracts entered into by builders are usually written on terms that will reduce the debt within a few years to a point where the vendee can take title and assume the underlying first mortgage.

Background of Federal Intervention

In this section we shall be concerned with the history of recent mortgage market developments and, because governmental intervention in home financing has played a leading role in the post-depression period, with the origins and activities of the several Federal agencies in this field.

The great building boom of the twenties reached a peak in the residential phase in 1925, when 937,000 dwelling units were constructed. Of this number 572,000 were single-family homes. The intensive activity of these years was accompanied by speculation in both lands and buildings and by a feverish demand for credit. The general prosperity of the times resulted in an unprecedented expansion in deposits and savings and, coupled with the attractive returns available on home mortgage investments, gave rise to active competition among lending institutions for home loans. Under those conditions various abuses developed that created serious weaknesses in the mortgage structure and contributed substantially to its collapse in the early thirties.

Competition among lending institutions did not take the form of price competition leading to a reduction in interest rates. This fact may possibly be explained by the inertia of the traditional rate of 6 per cent in many places; or it may be explained by necessity for earning a return sufficient to attract savings in competition with other channels of invest-

ment. There was some adjustment of initial fees, but it is likely that lenders found the most effective competitive device to be the inflating of property appraisals for loan purposes. The borrower, usually with little equity money, could be enticed to do business with that mortgagee offering the largest advance. On the other side, the lender, eager to put to work as much money as possible, was inclined to wink at overvaluation. Another weakness of the mortgage selection policies was the unwarranted dependence placed on the initial debt-value ratio. Risk was assumed to vary directly with the extent of the margin between the amount of the loan and the appraised value of the property at the time of the loan. The collateral was accepted as the primary protection against loss; insufficient weight was accorded to those environmental features which might lead to value depreciation and to the characteristics of the borrower. The result of such incomplete risk analysis coupled with overvaluation of the collateral led to the rapid disappearance of the margin of safety in face of the destructive forces of depression.

The lack of proper adjustment between the terms of the mortgage contract and the financial capacity of the borrower was another source of weakness in the predepression mortgage market. In the first place, even specious appraisals failed to boost the first mortgage sufficiently to meet the needs of many borrowers. Lending institutions were limited by law and custom to advances ranging from 50 per cent to 66 $\frac{2}{3}$ per cent of the value of the property. In a situation wherein all property values were affected by the boom conditions and appraisals were artificially inflated for loan purposes, borrowers found difficulty in bridging the gap and resorted to the placing of second mortgages and even third mortgages. This type of credit was available from second-mortgage companies or from the builders who sold the properties. Another scheme used by builders was to accept a small down payment and a land contract covering the balance. But junior liens are risky, and builders did not wish to tie up working capital in second mortgages and land contracts. Thus these securities were sold at sharp discounts, running to 20 and 30 per cent. And in order to offset these heavy costs of financing sales, the sales prices were proportionately inflated. The result was to burden the buyer with a heavy indebtedness on a property often of questionable quality, which he really could not afford to own. Only a relatively small decline in property values could wipe out his narrow equity and remove all incentive to protect his investment.

Many home purchasers found that though the size of the debt assumed was not in itself unreasonable, the terms of the mortgage contract created a disproportionate burden on the family income. In the first place, initial costs were heavy, involving appraisal fees, title examination costs,

and service charges of 1 to 3 per cent of the face value of the loan. Contract interest rates were 6 or 7 per cent, and amortization provisions calling for substantial principal payments semiannually or annually were hard to meet. The short-term loans, up to 5 years, were not intended to be paid off in full at termination, so that renewal was required, with all the heavy charges of a new loan. The junior mortgages, which were typically a part of the financial plan, were usually short term and required full amortization. These payments were relatively heavy and, added to the demands of the first mortgages, required a total outlay that too often could not be met when economic conditions reduced the borrower's income below the prosperity level.

As the nation entered the troublous thirties, the mortgage market was vulnerable at a number of points. The borrowers were struggling under heavy payments to preserve ownership of homes in which their equities were dangerously narrow. Lending institutions were loaded with an unprecedented volume of home mortgages of doubtful investment quality. Because of the local nature of the lending operations, mortgage portfolios lacked the powers of resistance that come from geographical diversification. Finally, there was no machinery for facilitating the flow of funds for real estate financing from regions of excess to regions of dearth. The lack of standardization of mortgages inhibited trading in this form of security, and no adequate channels had been developed through which financial institutions might convert mortgages into cash by discounting or using them as collateral.⁴⁰

Thus it was that in the early depression years of 1930 and 1931, lending institutions were ground between the upper and nether millstones of unusual demands for cash and frozen mortgages loans. The first indication of the basically unsound situation in the mortgage market appeared as early as 1926, when the foreclosure rate took an upward turn. This reversal in trend reflected the emerging oversupply of dwelling units in many cities and the abuses in home financing that have been described. By 1929, foreclosures had risen to an annual total of 135,000, or 212 per cent of the 1926 figures.⁴¹ The peak rate was reached in 1933, when 252,400 nonfarm mortgages were foreclosed. During 1930 and 1931 many of the lending institutions, believing that the difficulties of mortgagors were temporary, restricted foreclosure to the more hopeless cases and carried most of the delinquents. By 1932, the failure of the economic structure to right itself led to a policy of general retrenchment. New loans were

⁴⁰ American Institute of Banking, *Home Mortgage Lending*, pp. 17ff.; see also *Federal Home Loan Bank Review*, vol. I, no. 1, pp. 1-14, 1934.

⁴¹ Federal Home Loan Bank Board, *Eighth Annual Report*, p. 174, Exhibit 3, 1940.

rarely made, and borrowers were pressed to pay off their notes instead of renewing them. New loans by credit institutions dropped from over 4 billion dollars in 1928 to 778 million dollars in 1932 and 460 million dollars in 1933. In spite of home mortgage moratorium laws passed in many states, foreclosures gained momentum, millions of home owners faced dispossession, lending institutions, pressed for cash, found an increasing proportion of their assets tied up in unmarketable real estate and faced a rapidly growing mortgage delinquency.⁴² The mortgage crisis of 1933 was two-sided; on the one hand, all home owners were threatened either with actual loss of their homes through foreclosure or with a great decline in the value of their holdings in a real estate market that was moving from stagnation to panic. On the other hand, investors and financial institutions with large holdings of mortgages faced disaster and ruin. The widespread failures that occurred and the consequent suffering of depositors are well known.

Federal Home Loan Bank System

The establishment of the Federal Home Loan Bank System in 1932 is not rightly viewed as an emergency measure. For some time a movement had been developing to establish a central bank to serve mortgage-lending institutions, as had already been done in the field of commercial banking in the form of the Federal Reserve System and in the field of agricultural credit in the Federal Farm Loan System.⁴³ In 1931, President Hoover, long an exponent of home ownership and anxious to strengthen the home mortgage system in face of the emerging difficulties, called a conference of leaders in the lending and real estate field to consider, in the words of the President, ". . . in what manner can we facilitate the ownership of homes and how can we protect the owners of homes?"⁴⁴ The conference approved his proposal to create a system of home loan discount banks, and in July, 1932, the Federal Home Loan Bank Act became law.⁴⁵ The emergency objectives of the act, as brought out in the hearings, were to relieve the pressure on lending institutions by providing facilities for pledging sound assets to secure cash; in turn, pressure on home-owning borrowers could be reduced and sound refinancing made possible. With

⁴² The Twentieth Century Fund, *Debts and Recovery* (New York: The Twentieth Century Fund, Inc., 1938), pp. 162ff. The proportion of residential properties on which some interest or principal was delinquent ranged from 20 to 70 per cent in various cities (p. 164).

⁴³ Bills were introduced in 1919 and 1928.

⁴⁴ Publications of the *President's Conference on Home Building and Home Ownership*, vol. XI, p. 1.

⁴⁵ Public Act 304, Seventy-second Congress.

fewer foreclosures, less real estate would be dumped on the market by institutions, and the decline in property values would be checked. This condition would encourage owners to hang on to their homes if at all possible and would ease the fiscal problems of many municipalities by stopping the decline in tax revenues. As a recovery measure it was hoped that a flow of fresh funds into the market would make possible recovery in the building industry. From a long-term viewpoint, the act was designed permanently to strengthen participating institutions by adequate regulation and to prevent a recurrence of the current difficulties by providing for a reservoir of credit and a free flow of mortgage funds.

The Federal Home Loan Bank System established by the act was governed by a board of five members appointed by the President. In 1942 the board was abolished and replaced by a commissioner, and in 1947 a board of three members known as the Home Loan Bank Board replaced the commissioner. The board was empowered to divide the country into 12 districts and to establish in each district a Federal Home Loan Bank. Stock in the banks was to be purchased by mortgage institutions eligible for membership, with a limit set at 1 per cent of the unpaid balance of mortgages held.⁴⁶ Membership was restricted to savings and loan associations, insurance companies, and savings banks. The savings and loan interests took command of this proposal before it became law and molded it to their own purposes. It may be considered a savings and loan organization, and only 1 per cent of all member institutions are not of that category.⁴⁷

Members of the System are eligible to borrow from the banks on their notes secured by eligible mortgages or obligations of or fully guaranteed by the United States.⁴⁸ Interest rates are set by the several banks, and members are limited to outstanding advances of not more than 12 times the amount paid in on subscriptions to the stock of the bank. The 12 banks may borrow to secure capital in addition to paid-in capital and deposits of members, other banks, and instrumentalities of the United States. The governing board of the System may issue consolidated Federal Home Loan Bank debentures on bonds that are the joint and several obligations of all the district banks. Individual banks may issue their

⁴⁶ The United States Government still holds about 125 million dollars in stock, an initial subscription intended to be retired as member subscriptions increase. Members now own 74 million dollars in shares, or 37 per cent of the paid-in capital. National Housing Agency, *Fourth Annual Report*, p. 99, 1945.

⁴⁷ National Housing Agency, *Fourth Annual Report*, p. 81, 1945.

⁴⁸ A provision made in 1935 to permit advances to nonmembers on the security of FHA-insured mortgages has been little used.

own debentures or bonds or other obligations.⁴⁹ These securities are not guaranteed by the United States.

The Federal Home Loan Bank System, while a useful part of the mortgage structure, has never attained the size or scope of operations visualized by its promoters. This fact may be partly explained by the effective restriction of its membership to one type of institution and by the fact that these first years of its existence have covered a period during which its services were not widely needed because of the excess of investment funds in the hands of lending institutions. After a slow start, membership in the system increased until it reached 3,900 in 1938, from which point it has dropped to 3,700.⁵⁰ Members include 12 insurance companies, 25 mutual savings banks, 1,471 federally chartered savings and loan associations, and 2,190 state-chartered associations. Member associations constitute 60 per cent of all savings and loan associations;⁵¹ they hold 9 billion dollars in assets, or 90 per cent of all savings and loan assets; over 90 per cent of all new loans in 1946 were made by members.⁵²

The fact that the Bank System did not function as an emergency agency for financial relief is evidenced by the failure of members to call for large advances. It was another agency, the HOLC, that bailed out the savings and loan associations along with other lending institutions.

During the first 7 years of operation, the annual advances to members remained below 100 million dollars except in the year 1937. Beginning with 1944, when advances for the year exceeded 200 million dollars for the first time, the loans have increased to a total of 329 million dollars for 1946. From 1937 through 1941, the outstanding balance of advances ranged around 200 million dollars. In the postwar years, this balance has mounted to nearly 300 million dollars at the end of 1946.⁵³ About one-fifth of the outstanding advances represent loans to members that are not secured by mortgages but only by the bank stock owned by the borrowers. Interest rates on advances were at 5 per cent during the early years of operation, but the banks have now reduced the rates to

⁴⁹ More than 0.5 billion dollars of obligations in series of consolidated debentures, bonds, and notes, have been issued; there have been no issues by individual banks. Obligations amounting to 68.5 million dollars were outstanding at the end of 1945 and 169 million dollars at the end of 1946. The interest rates for the early series were from 1 to 2 per cent and the terms from 1 to 5 years. Recent rates have been from 0.75 to 0.90 per cent.

⁵⁰ Federal Home Loan Bank Board, *Eighth Annual Report*, p. 52.

⁵¹ *Federal Home Loan Bank Review, Statistical Supplement*, 1947, p. 5, Table 4.

⁵² *Ibid.*, Tables 3, 7, 11.

⁵³ *Ibid.*, p. 3, Table 2.

a range of from 1.5 to 2.5 per cent. The banks are operating at a profit that aggregated 3.4 million dollars for 1946; dividends of 1 to 1.5 per cent were paid by the banks.⁵⁴

The value of the Federal Home Loan Bank System is not to be measured solely in terms of the utilization of its financial resources. The governing board and the officers of the banks have performed a useful function in encouraging improved business practices by member institutions. The examination and supervision by the board of all federally chartered associations and all others that are insured by the Federal Savings and Loan Insurance Corporation has had a salutary effect. The board has provided research facilities for the industry and until recently published an excellent monthly, the *Federal Home Loan Bank Review*, containing technical articles and comprehensive statistical coverage of significant factors in the mortgage market. A promotional scheme, the Registered Home Service, has met with only modest success.⁵⁵

Federal Savings and Loan Associations

The notion of Federal charters for savings and loan associations was closely tied up with the idea of a central reserve system. Many persons felt that the slow start of the Federal Home Loan Bank System was in part due to the lack of a provision for organizing new associations where existing institutions failed to join or where adequate lending facilities did not exist. Furthermore, it was urged that a desirable uniformity in practices and policies could best be accomplished under centralized control.⁵⁶ Thus, within a year of the passage of the Home Loan Bank Act, provision was made in the Home Owners' Loan Act of 1933 for the establishment of Federal associations. The Federal Home Loan Bank Board was authorized to charter, examine, and supervise new institutions only in communities where there existed a need for a new source of credit and where existing associations would not be harmed. Provision was made for converting the charters of members of the Bank System from state to Federal.⁵⁷ Federals are required to be members of the Bank System and to be protected by the Federal Savings and Loan Insurance Corporation.

By 1940, there were 1,429 Federal savings and loan associations, of

⁵⁴ *Federal Home Loan Bank Review*, March, 1947, pp. 169-172.

⁵⁵ See *Ibid.*, June, 1941, p. 298, for a description of this plan to develop new business for member associations by providing complete building and financing services to customers.

⁵⁶ School of Law, Duke University, *Law and Contemporary Problems*, vol. V, no. 4, p. 494, Autumn, 1938.

⁵⁷ By 1939, 42 states had passed enabling legislation to permit conversion.

which 56 per cent had been converted from state charters.⁵⁸ Federal associations held about one-third of all savings and loan mortgages and were accounting for some 40 per cent of all new loans made by associations. In the membership of the Home Loan Bank System, Federals comprise 36 per cent in number and 35 per cent in assets. One-half of all new loans made by members are out of Federal associations. By 1946, the number of Federals had increased to 1,471, with assets that were 52 per cent of the assets of member associations; Federals were originating 50 per cent of all savings and loan association mortgages.⁵⁹

It would appear that the justification for establishing new associations has been generally removed. During the fiscal year of 1940, only two charters to newly formed associations were issued. During the same period, 62 charters provided for the conversion of existing institutions. Since 1940, there has been only a small increase in the number of Federals, mainly through conversions. The advantages of conversion from the standpoint of the associations appear to lie primarily in improved examination and supervision and in an enhancement of prestige and public confidence that is presumed to result.

Federal Savings and Loan Insurance Corporation

The creation of the Federal Deposit Insurance Corporation in 1933 to protect bank depositors raised the question of offering similar insurance to shareholders in savings and loan associations. In 1934, the Federal Savings and Loan Insurance Corporation was established under the aegis of the Federal Home Loan Bank Board. Federal associations were compelled to insure their accounts, and the privilege of insurance was accorded to all state-chartered institutions who would accept regulation of certain phases of their policies. An insurance premium is paid to the corporation, and shareholders in insured associations are protected up to \$5,000.⁶⁰ By the end of 1946, insured associations totaled 2,496, of which 1,471 were Federal associations for which insurance is compulsory, and 1,025 state-chartered associations. About 40 per cent of all operating savings and loan associations were insured; their resources represented 73 per cent of the national aggregate.⁶¹ Of the association members of the Federal Home Loan Bank System, two-thirds in number and four-fifths in aggregate assets were protected by insurance. Insured

⁵⁸ Data in this paragraph are from Federal Home Loan Bank Board, *Eighth Annual Report*, part III.

⁵⁹ *Federal Home Loan Bank Review, Statistical Supplement*, Tables 4, 12, 1947.

⁶⁰ Ninety-eight per cent of all accounts in insured associations were less than \$5,000 in 1940. Federal Home Loan Bank Board, *Eighth Annual Report*, part IV.

⁶¹ *Federal Home Loan Bank Review*, March, 1947, p. 173.

associations accounted for nearly 80 per cent of all new mortgage loans by operating savings and loan associations in 1946.⁶²

Home Owners' Loan Corporation

In the months following the establishment of the Federal Home Loan Bank System in 1932, the crisis in the real estate and mortgage markets rapidly grew more serious. The downward spiral, fathered by industrial stagnation, led to a foreclosure rate approaching 1,000 homes per day and a complete demoralization of the real estate market by reason of vanished demand and the widespread dumping of homes that was the fruit of foreclosure. Financial institutions were shaken in the face of heavy withdrawals by persons who had lost confidence in their soundness and by those who were forced to fall back upon their savings to live. In a desperate effort to liquidate assets to meet the demands for cash, the institutions pressed for collections at a time when leniency would have been the sounder policy. Foreclosure in a frozen real estate market was no solution.

The failure of the Home Loan Bank System to stem the tide, the threatened extinction of home ownership within a large segment of the population, and the desperate position of the financial structure called for prompt and drastic action. Under the leadership of the Administration, an emergency measure was rushed through the Congress. This erected a bulwark of governmental credit to protect lending institutions and, for the home owner, substituted a fresh start and a beneficent creditor for financial delinquency and a mortgagee made harsh through desperation. The Home Owners' Loan Act of 1933 was pushed through Congress as a measure to protect home owners, but it was the rescuing of savings and loan associations, life insurance companies, and other agencies with frozen mortgage holdings that was an objective of equal though less publicized importance.

The act established the Home Owners' Loan Corporation under the direction of the Federal Home Loan Bank Board. Authority was provided for the issue of bonds originally in the amount of 2 billion dollars but later increased to a limit of 4.75 billion dollars. By amendment in 1934, the principal as well as the interest was guaranteed by the United States Government. The home owner who was in true distress, threatened with foreclosure or already dispossessed, might apply to the corporation for the refinancing of his obligation. Bonds of the corporation were offered to the mortgagee institution in an amount up to the outstanding indebtedness, with the upper limit set at \$14,000. The debt

⁶² *Ibid.*, *Statistical Supplement*, 1947.

was transferred to the corporation, which rewrote the mortgage on easier terms, usually at 5 per cent interest for 15 years with monthly amortization.⁶³ Loans up to 80 per cent of the appraised value of the property were made. In effecting the exchange of bonds for the mortgage, an attempt was made to write down the debt by offering bonds of lesser value than the amount due on the loan. In many cases, lending institutions were willing to accept such a reduction and to substitute a sure claim on a reduced amount for an uncertain claim on the full amount due under the mortgage. In the entire operations of HOLC, aggregate reductions of 200 million dollars, or 7 per cent of the original debt, were effected.⁶⁴

While 99 per cent of the HOLC mortgage loans were acquired in exchange for bonds, there were provisions in the act permitting the advancing of cash up to 40 per cent of the value of the property in cases where the mortgagee refused to accept bonds. Furthermore, cash advances were made to owners of unencumbered properties for the repairs and the payment of taxes and to HOLC mortgagors for the same purposes and for modernization and enlargement, where such advances would enhance the mortgage security.

The HOLC operation had reached gigantic proportions by the time its lending activities were terminated in 1936. Applications were received from 1,880,000 home owners, whose debt aggregated more than 8 billion dollars. More than one-half of the applications were finally accepted, totaling 1 million in number of loans and 3 billion dollars in amount. The HOLC held mortgages on one out of every ten owner-occupied urban homes, both mortgaged and unencumbered, and in total these loans accounted for one-sixth of the urban home mortgage debt of the nation.⁶⁵ One out of five mortgages on owner-occupied homes was held by HOLC; in South Dakota, the proportion was 55 per cent.⁶⁶

From 1935 to 1937 the HOLC was actively engaged in the purchase of shares in Federal and state-chartered savings and loan associations for the purpose of providing additional capital for lending or for strength-

⁶³ In 1939, provision was made to reduce the rate on outstanding loans to 4.5 per cent to meet the FHA rate, and about 200,000 loans were recast and the term extended to 25 years.

⁶⁴ Federal Home Loan Bank Board, *Eighth Annual Report*, p. 154.

⁶⁵ School of Law, Duke University, *Law and Contemporary Problems*, vol. V, no. 4, p. 492, Autumn, 1938. In Detroit, Michigan (Wayne County), one out of every four owned homes was mortgaged to HOLC.

⁶⁶ Hearings, Subcommittee on Housing and Urban Redevelopment, Special Committee on Post-War Economic Policy and Planning, part 6, p. 1409.

ening the financial position of the associations. Total investments during these 3 years were 212 million dollars. At the peak, the government investment was 25 per cent of the combined share capital of all associations. Since 1938 new investments have been restricted to special cases and the total was increased by only 7 million dollars.⁶⁷ At the end of 1945, the HOLC reported that repayments had reduced the holdings to only 21 million dollars in savings and loan stock;⁶⁸ by 1947, the holdings were less than 10 million dollars.

There can be little doubt but that the HOLC was a major contributor to recovery from the demoralization of the year of its birth. It helped to still the panic in the hearts of home owners and investors. It saved many a financial institution from collapse. It helped to restore stability in municipal finances by advancing funds for payment of back taxes and reestablishing regularity of tax payment for many a delinquent.

Various real estate and mortgage series show that recovery began in 1934. Foreclosures were sharply checked and began a steady decline, which continued into the postwar period. The rapid fall in rents was stopped and a slow recovery was begun, which reached a plateau in 1938. Home mortgage lending activity, outside of HOLC advances, in 1934 rose slightly above the 1933 low point and inaugurated an upward movement that rapidly gained momentum. Residential building activity was delayed for a year and did not start its recovery movement until 1935. It is not to be implied that HOLC was solely responsible for the turn in affairs that coincided with the first years of its operation, but there is general agreement that it was one of the most acceptable and most effective recovery measures of the New Deal.

Since the close of lending operations in 1936, the HOLC has been in liquidation. Loan servicing has been a primary function and has been efficiently conducted. In handling delinquent accounts the corporation has been liberal when circumstances warranted and firm with borrowers not sincere in their efforts to meet obligations. For worthy borrowers in trouble, extensions are freely granted and readjustments arranged. In spite of an intelligent collection policy it was inevitable that many loans should become hopelessly delinquent and that resort should be made to foreclosure. By June 30, 1946, the corporation had acquired 198,000 properties, or 19 per cent of the original loan accounts. However, all but 200 of these properties had been sold, at an average sales price of \$3,700, representing about three-quarters of the total HOLC capital cost. Thus the capital loss, taking into account all arrearages

⁶⁷ Federal Home Loan Bank Board, *Eighth Annual Report*, p. 63.

⁶⁸ National Housing Agency, *Fourth Annual Report*, p. 103, 1945.

and costs of acquisition and reconditioning, amounted to about \$1,200 per property.

There is general agreement that the primary objectives of HOLC were accomplished, i.e., the checking of the rapidly mounting foreclosure rate and the bailing out of financial institutions holding frozen mortgages. The home owner and the investor were dramatically rescued. A final test is the cost. At the time the act was passed, the cost was not given great weight; desperate measures were required. Those who did consider the matter inevitably came to the conclusion that it would be an expensive rescue mission. The loans taken over represented the worst of mortgage risks. The borrowers were among those least capable of meeting long-term obligations; many of them were persons beyond productive age. The collateral properties were often in the least desirable areas or in communities in economic decline. The controls over the selection of loans that are normally employed by lending institutions were useless because of the nature of the operation. The credit standing of the borrower had little significance, for all applicants were currently in bad repute. Appraisals were made under a definite valuation formula, but valuations were elastic in many cases. Thus it was from the first a reasonable expectation that a large share of the loans acquired by the corporation would fall into default and that ultimate losses would be large.

The outcome of the HOLC operation has exceeded the most optimistic expectations. Ten years after the last of the original loans was closed in June, 1936, the HOLC reported itself 80 per cent liquidated. Borrowers still making payments were but 40 per cent of the original million. Losses have been offset by interest earnings and other income to the extent that it seems assured that the HOLC will finally close its books without loss and will return the original capital of 200 million dollars intact to the U.S. Treasury.⁶⁹

Two factors have operated to reduce loss. First, the HOLC has been blessed with competent, businesslike management. Second, the period of liquidation has coincided with an upward trend in the business cycle, bolstering the incomes of borrowers and facilitating the sale of foreclosed properties.

Federal Housing Administration

The ills of the real estate market in the thirties were not by any means cured through the ministrations of the Federal Home Loan Bank System and the HOLC. The ravages of disease were checked, but a

⁶⁹ *Federal Home Loan Bank Review*, October, 1946, p. 4.

strong tonic was required to restore the free flow of mortgage credit and to revivify the dormant building industry. A revival in this important industry was thought by many economists and governmental officials to be the key to recovery. In 1934 a bill was drafted under the aegis of the National Emergency Council that was ostensibly a recovery measure but looked to certain permanent reforms. The National Housing Act, establishing the Federal Housing Administration, was passed in June of 1934 to stimulate the construction and heavy goods industries by encouraging the flow of credit and to improve lending practices and provide additional machinery needed for the creation of a sound mortgage market. The provision of housing for persons of low income was a corollary objective that was never made effective. The bill was passed with little opposition except from some persons who felt that provision should be made for slum clearance operations and others who opposed governmental tampering with private lending operations.

The basic principle upon which almost all the FHA activities are founded is the underwriting of private risk by public credit. The FHA does not lend money but, with an insurance scheme as a first line of defense, acts to interpose the credit of the United States Government between the lending institution and possible loss through default on housing loans. This device in various forms had been employed in a number of European countries as a method of subsidy for aiding municipalities, limited dividend corporations, and cooperatives in the financing of housing projects for persons of moderate and low income.⁷⁰

Title I—Property Improvement Loans. Title I of the National Housing Act made a direct attack upon unemployment. Provision was made for the insurance of lending institutions against loss arising from unsecured loans made to individuals for the purposes of modernizing, repairing, altering, equipping, or in any way improving existing structures. Lenders were protected against losses up to 20 per cent of the total original face value of all such loans. No insurance premium was charged to the lenders for this protection. In 1936 the 20 per cent protection was reduced to 10 per cent when the FHA became convinced that losses would not exceed 5 per cent.

The inauguration of Title I of the National Housing Act was accompanied by a nation-wide promotional campaign as flamboyant as it was intensive. Local citizens' committees were formed to encourage modernization and repair, and house-to-house canvasses were made to

⁷⁰ See Fisher, Ernest M., and Richard U. Ratcliff, *European Housing Policies and Practices* (Washington, D.C.: Federal Housing Administration, 1937).

secure pledges to spend.⁷¹ These high-pressure tactics and the liberal provisions of the law led to abuses that discredited Title I in many quarters and induced later corrective amendments. But the same tactics did produce a large volume of business. By the end of 1934, about 30 million dollars in loans had been insured; it was estimated that the campaigns had created more than 210 million dollars in modernization work. The majority of loans were for 2- and 3-year terms and less than \$400 in amount. When the original provisions for the insurance of modernization credit loans expired in April of 1937, almost a million and a half notes had been insured in a total amount of 560 million dollars.

In February, 1938, the insurance of property improvement loans was revived by popular demand. Lending institutions had found this type of loan highly profitable and virtually riskless. Building material and equipment dealers had employed the plan widely as a selling aid. Congress was convinced of its efficacy as a recovery measure and, with a business recession in prospect, reinstated the scheme with some modifications. Loans to finance movable equipment were ruled out and the maximum insurable loan was reduced to \$10,000. Under certain conditions, insurance was to be granted for the construction of new homes provided that the loan did not exceed \$2,500. In 1939, an amendment provided for an insurance premium to be paid by the lending institution without creating an additional burden on the borrower.⁷²

By the end of 1945, property improvement loans numbering 5 million and in the amount of 2 billion dollars had been insured under Title I of the National Housing Act. The volume of loans during 1940 and 1941 was at the highest level in the history of the act, approaching 700,000 per year in number for an annual sum of nearly 300 million dollars. Postwar activity is now approaching this level. The total of new small homes constructed under the provisions of Title I was about 40,000 during the 4 years 1938 through 1941, when Class 3 loans were being made. These loans were designed for homes costing from \$3,000 to \$3,500 located in areas that might not be acceptable for insured mortgage financing under Title II. The usual Title II property standards are not enforced. In connection with the Veterans' Emergency Housing Program in late 1945, Class 3 loans were reactivated. The maximum interest rate was 4.5 per cent, plus 0.5 per cent mortgage

⁷¹ By the end of 1934, 3,800 committees had been organized for the "Better Housing" campaign, 1,725 canvasses started, and 463,000 jobs pledged at an average value of \$276 per job. *First Annual Report*, Federal Housing Administration, p. 11.

⁷² The maximum charge to the borrower was \$5 discount per \$100, or an effective interest rate of 9.72 per cent.

insurance premium on the face value of the loan, and a maximum term of 20 years and 5 months. The borrower was required to have a 5 per cent equity.

Banks have accounted for over 60 per cent of all Title I loans, with finance companies, usually operating through local materials dealers, providing about 30 per cent of all advances. The average loan has been about \$400 and for a term of less than 3 years. The major types of property improvement for which loans are advanced are plumbing and heating, painting, roofing, insulation, and additions and alterations.

Net losses on property improvement loans have totaled about 24 million dollars or 1 per cent of the total value of all insured loans. Claims have been paid on 3.3 per cent of the 6 million loans put in force. At the present time, the revenues from the insurance premiums now being charged are sufficient to meet the administrative expenses of the insuring operation and to provide for losses on defaulted notes taken over.

The emergency phase of the property improvement loan insurance scheme has been over for some time. During the wartime housing shortage, the plan was employed to encourage the remodeling of dwellings in defense areas to provide additional dwelling space. The popularity of the plan with banks and building material and equipment suppliers has been responsible for its continuation. So well entrenched is Title I that it may be considered to be a more or less permanent device.⁷³

Title II—Mutual Mortgage Insurance. The backbone of the National Housing Act and by far the most widely used feature has been the insurance of mortgages on residential property. The mutual mortgage insurance plan as set forth in Sec. 203 provides for the insurance by FHA of approved lending institutions against loss on mortgage loans advanced on the security of one- to four-family structures. Provision is also made in Sec. 207 for the insurance of mortgages on large-scale multifamily housing projects. It is again to be noted that the FHA does *not* lend mortgage money; the FHA is an insurance organization collecting premiums, setting up reserves, and indemnifying the insured lending institution in case of mortgage default and loss.

The act and regulations provided originally that to be eligible for insurance a loan must be held by a responsible, approved mortgagee institution and must not involve an original debt of more than 80 per cent of the appraised value of the property as determined by FHA, with a mortgage limit of \$16,000. The loan term was limited to 20

⁷³ For an excellent discussion of Title I, see McFarland, Carter, "Economic Evaluation of FHA's Property Improvement Program," *Journal of Land and Public Utility Economics*, November, 1947.

years, with the debt to be completely amortized by the end of the term. The interest rate was limited to 5 per cent plus 0.5 per cent mortgage insurance premium, though the interest rate might be less than 5 per cent at the option of the lender. Later changes decreased the interest rate to 4.5 per cent and beginning in 1938 permitted more liberal terms on properties valued at \$6,000 or less that were newly constructed and to be owner occupied. On such properties, the term of the loan might be as long as 25 years and the debt-value ratio as high as 90 per cent.

The more liberal terms for the mortgage on the small, new, owner-occupied homes were said to be justified by the lower degree of risk involved. A new home resists obsolescence and depreciation more successfully than an older structure and is usually located in a new and growing neighborhood. The market for homes of \$6,000 or less in original value is broad and less vulnerable in time of depression than the market for higher priced homes. Finally, owner occupancy is a strong bulwark against mortgage default.

The terms of eligibility for mortgage insurance reflect the objectives of the act. The high ratio loan was designed to encourage new construction by making it easier for persons with small cash assets to undertake home purchase. The longer loan term spread repayment more thinly and reduced the burden of debt service on persons of moderate income. The monthly amortization plan was designed to benefit the purchaser, by equalizing the financial burden of repayment and by permitting debt service to be paid like rent at the customary first-of-the-month bill-paying time. The scheme was also of benefit to the lender by providing for a regular reduction of the debt from the first monthly payment and by reducing the debt on a schedule that, as far as could be predicted, would be faster than the value depreciation of the property.

Another feature of the FHA plan is the regulation that one-twelfth of the estimated annual taxes and hazard insurance premium is to be deposited with the mortgagee with each monthly payment. Thus a fund is built up sufficient to meet these costs as they arise, and the lending institution is assured that no tax delinquency will occur and that the property will always be adequately protected by insurance. This device is a convenience to the borrower, since he is not periodically faced with the necessity for raising a relatively large sum to meet these charges and since the lender takes the responsibility for making the payments. This scheme was rarely used before it became popularized through the FHA plan, but at the present it is almost a regular feature of all monthly amortization schemes.

The monthly payment plan of financing was not originated by FHA, for it had been long used by savings and loan associations and some life insurance companies and savings banks. All HOLC mortgages are of this type. However, there is no doubt that the FHA has contributed greatly to the present widespread popularity of the monthly amortization scheme and to its adoption by commercial banks.

The insurance of mortgages, like the insurance of lives, calls for an analysis and selection of risks, and the rejection of those applications for insurance where the risk is judged to be excessive in relation to the established insurance premium. At the start, there was no actuarial basis upon which the FHA could judge the risks involved in the insuring of mortgages in order to establish an adequate premium out of which a reserve fund could be created. The basic legislation provided for an initial reserve fund of 10 million dollars to be immediately appropriated, but such an amount would scarcely be adequate to meet probable losses in a time of economic stringency. The original premium rate of 0.5 per cent of the face value of the mortgage, later changed to 0.5 per cent of the outstanding balance, was the result of crude estimates. Up to the present there is no evidence that the premium rate is improper, although on the other hand there is no evidence that it is actuarially sound. The proceeds from the premium payments plus income from appraisal and other fees are now sufficient to pay the operating costs of the agency and to make substantial annual additions to the reserve fund. The fund as of 1940 stood at about 30 million dollars; at the end of 1946, the balance was 103 million dollars. No man can say whether this reserve is adequate to meet the losses that would occur during a severe depression. The only evidence is the fact that, up to the present, losses have been very small, totaling under 3 million dollars, and the reserve has grown steadily. But this evidence is of little value, since the agency has existed only during a time when housing market values were rising and economic conditions steadily improving from the depths of a depression through the excesses of a war economy and a postwar boom. Because of the uncertainties of the adequacy of the reserve funds, the confidence that lenders have reposed in the FHA plan is founded on the guaranty by the United States Treasury of FHA debentures, which are used to indemnify lenders for losses on insured loans that are defaulted.

In order to evaluate mortgage risk on individual loans, the FHA has devised an ingenious scheme of mortgage risk rating, which constitutes one of its greatest contributions to the development of a sound mortgage market. The risk-rating procedure is based upon the individual appraisal of a large number of separate factors that affect the degree of risk in the

mortgage under consideration. These factors are arranged in four categories: the property, the location, the borrower, and the mortgage pattern. Weights are assigned to each of the factors and each factor is graded to reflect the degree of risk involved. The various factors are summarized and a final grade is given to each mortgage as a measure of the relative probability of mortgage loss. The FHA has set up an extensive field staff to perform the risk-rating function.

If the rating or grade of the mortgage falls below a certain level, it is rejected, or in some cases, a readjustment in terms or some physical improvement in the property is suggested to the applicant that will raise the rating and make the mortgage eligible for insurance. The rating is used as the basis for classifying eligible mortgages into three quality groups. The insurance reserve fund is subdivided into separate accounts set up for groups of insured mortgages of the same quality of risk and approximately the same maturity date. This accounting procedure is needed to carry out the mutual feature of the FHA plan, which provides for the return to the borrower of his share in the balance of the group reserve fund that remains after payments of all loss claims. The risk grade of the mortgage is also of significance in the secondary mortgage market, where market quotations may reflect the FHA risk rating.

When a mortgage falls into default, the lending institution that is insured against loss forecloses the mortgage in the regular manner and transfers title to the FHA. In return, the FHA issues debentures to the mortgagee in the amount of the unpaid balance of the loan plus certain allowances for costs. These debentures are issued against the FHA insurance reserve fund and are guaranteed by the United States Government. Under original regulations the debentures matured 3 years after the maturity date of the mortgage and bore 3 per cent interest. Through 1945 debentures had been issued on 4,066 claims out of a total of 1,100,000 premium-paying mortgages on small homes. The recovery through the sale of the collateral properties was sufficient to reduce the loss to FHA to only \$2,430,705.

Like life insurance and fire insurance companies that carry on activities to encourage the spread of health measures or fire-prevention practices, the FHA has been active in the prevention of mortgage loss. It has done much to improve residential design and soundness of construction through research, education, advice to builders, and the refusal to insure mortgages on structures that do not meet minimum standards. Perhaps most significant has been the influence of FHA on subdivision design. In recent years, it has been exceptional for a subdivider to proceed without first securing advice and the approval of the proposed layout from the nearest FHA office.

Title VI—War Housing Insurance. The war emergency required that the Federal government make provision for the housing of warworkers moving into centers of war production. It was the policy that, wherever possible, such accommodations should be provided by private capital, but it was recognized that investment under such circumstances involved a special uncertainty and risk and that losses that might be sustained should be charged off as a war cost. For these reasons, the Congress in March, 1941, enacted amendments to the Nation Housing Act, which set up a special war housing insurance fund and which provided under Title VI, Sec. 603, for the insurance of mortgages on new small homes as an emergency measure completely separated from the prewar insurance operations under Title II. Under Title VI, mortgage insurance operated much as under Title II, but there were two principal differences. In the selection of mortgages for war housing insurance, a demonstration of the "economic soundness" of the loan was not required as it is under Title II; this feature permitted the insurance of mortgages where war housing was needed even though the ultimate security was admittedly questionable; inflated construction costs could be used as the basis of valuation for lending purposes. The second difference was in the provision under Title VI for the insurance of mortgages where the builders rather than the home owners were the original mortgagors. This provision was of aid to builders in procuring working capital, since the FHA made a firm commitment to insure the mortgage upon completion of the house; the mortgage securing the construction loan could be simply assumed by the ultimate purchaser. In the case of rental projects (Sec. 608), the mortgage advances were insured during the construction period. It was the intention to encourage the construction of rental units. Actually, about one-half of the wartime Title VI units were built for rent, but this fact is mainly the result of controls exercised through the building-material priority system, which required that a certain proportion of new construction must be offered for rent.⁷⁴ Title VI mortgages were restricted to a maximum of \$5,400 on one-family houses, 90 per cent of appraised value, and a 25-year term. Through June, 1944, three out of four dwellings built under the provisions were one-family, the average value was \$5,000, and the total mortgage insurance written was about 1 billion dollars, covering 235,000 mortgages. During the war years, Title II insurance was virtually unused.

The postwar housing crisis and the need for the encouragement of house construction led to the continuation of Title VI as an emergency measure.

⁷⁴ In case of default on a Title VI (Sec. 608) mortgage, the lender could immediately claim FHA debentures without waiting to foreclose.

The Veterans' Emergency Housing Act of 1946 modified and extended Title VI as a device for permitting the insurance of mortgages on homes built at inflated costs. At the same time the interest rate was reduced to 4 per cent and the maximum mortgage amount increased from \$5,400 to \$8,100.

Title VI, Sec. 603, became inactive on April 30, 1948, but the Housing Act of 1948 (P.L. 901, 80th Congress), passed a few months later, liberalized Title II, Sec. 203, and among other changes, permitted the insurance of 95 per cent, 30-year mortgages up to \$6,000 on new, owner-occupied single-family dwellings. Where builders were the mortgagors, the debt-value limit was 85 per cent. Maximum interest rates were set by regulation at 4.5 per cent. Title I provisions were liberalized and changes in Sec. 608 and Sec. 207 were aimed at encouraging the construction of moderate rental housing and cooperative projects. A new type of yield insurance became available for large-scale, mortgage-free investment in moderate rental housing. Insured credit facilities were provided for the production and marketing of prefabricated housing and for builders utilizing the economies of large-scale production.

Evaluation—Insurance of Home Mortgages (Secs. 203 and 603). An appraisal of the impact of the FHA program of insuring mortgages on small homes must start with an understanding of the market environment into which the plan was launched. We have already discussed the timing of the passage of the National Housing Act in 1934 within the sequence of depression events. The act is to be included among the early New Deal legislation and at the time was viewed with alarm and distrust by the very lending fraternity that has since become its most ardent sponsor. To this group, the extension of Federal controls was distasteful, to be sure, but the reduction of interest rates involved in participation under the act was anathema. Furthermore, the 80 per cent loan and the 20-year term were widely held to be radical and unsound. As a result of these attitudes, lending institutions were slow to apply for approval as mortgagees and to offer FHA insured mortgages to prospective borrowers. A campaign of education and persuasion conducted by FHA gradually took effect, but the most important factor in spreading the FHA plan was the force of competition. FHA-insured loans were attractive to borrowers, and, as there developed, with recovery, an increasing pressure of funds seeking investment, lending institutions found it more and more necessary to offer the advantages of the FHA plan if they wished to retain their share of the mortgage business. The savings and loan group were the slowest to adopt the plan and today account for a portion of FHA business far below their proportionate share. The reluctance of the savings and loan associations originated in part from a resistance to the

new competition from commercial banks and mortgage brokers that FHA mortgage insurance engendered. Prior to FHA the thrift associations had held a virtual monopoly on long-term high percentage loans, typically two-thirds and 11 years. But first HOLC, on a temporary basis, and then FHA broke into this monopoly. Another factor was the reduction in interest rate called for under FHA. Savings and loan associations generally operated on a relatively high lending rate and a generous dividend to the shareholders or depositors. It was feared that a reduced dividend would cut the flow of savings to the institutions or that, if dividends were maintained, the reduced spread would be inadequate to meet costs of operation. Under the market conditions that have obtained since 1934, these fears have not been generally realized, though it is true that the FHA maximum interest rate is generally the market rate for all loans. However, savings and loan associations, as in the case of other types of institutional lenders, push uninsured loans under their own loan plans wherever possible. The advantage to the lender is the saving of the mortgage insurance premium; the advantages pointed out to the borrower are the absence of red tape, the speed with which the loan can be closed, and lower initial costs. It has been said that many institutions manage to make the soundest loans under their own plans and the less desirable loans under FHA.

The influence of the FHA has spread far beyond the home loans that are insured. Before listing the accomplishments of the scheme, it will be well to examine certain measures of FHA's part in small-home financing. We shall see that, though no FHA monopoly exists, the competitive position of the loan plan is strong enough to control or strongly influence the important lending policies of the major lenders.

Between 1939 and 1945, one-fifth of the total amount of nonfarm mortgages of \$20,000 or less recorded by financial institutions were FHA insured. At the end of 1944, FHA-insured mortgages constituted about one-third of all one- to four-family mortgages held by financial institutions.⁷⁵ But the major impact of FHA is found in new construction, where its beneficent influence affected not only the financial pattern but also the physical characteristics of the new homes. By 1937, one-fifth of all new small homes were being built under FHA inspection; *i.e.*, in anticipation of the placing of an FHA-insured mortgage. This means that the location, the design, the materials and equipment, and the quality of the workmanship were passed on by FHA technicians. The proportion of new building under the aegis of FHA had increased to nearly 40 per cent by the last prewar year, 1941. With wartime construction controls

⁷⁵ *Insured Mortgage Portfolio*, Second quarter, 1946, p. 10.

and the innovation of Title VI, the ratio rose to 80 per cent in 1943 and dropped back to 66 per cent in 1944. For the first postwar years, the proportion was below the prewar level.

The aggregate measures of FHA activity are impressive. Through 1946, over 1.25 million small homes had been insured under Sec. 203, Title II, involving mortgages totaling 5.3 billion dollars. Approximately two-thirds of this business involved new homes and one-third represented mortgages on existing dwellings. War housing mortgage insurance under Sec. 603, Title VI, covered 393,000 homes and totaled 1.6 billion dollars.

There is little doubt but that the operation of the FHA has been the most important single development in the housing market in recent history. A listing of accomplishment will support this conclusion.

1. The FHA has been a major factor in the reduction of the costs of shelter through inducing a general decrease in mortgage interest rates, minimizing initial charges in connection with the placing of the mortgage, eliminating junior financing, and encouraging long-term loans, which avoid costs of renewal.

2. Home purchase has been encouraged through reducing both the down payment required and the monthly mortgage payments. The competition of the FHA plan has forced all lenders to liberalize lending terms.

3. The improvement of mortgage lending practices and procedures in recent years among all lending institutions is due in large part, though not entirely, to FHA. The long-term, high-percentage loan, the elimination of junior financing, and the inclusion of taxes and insurance in the monthly payment have been mentioned in other connections. But the most significant contribution has been the development and wide acceptance of a sounder and more precise technique for analyzing investment risk in mortgages. The FHA mortgage risk rating system, now widely adapted for general use, represents a significant advance in analytical method, which can be of great value as a stabilizing influence.

4. FHA has raised the quality of new homes through the imposition of high standards as a condition of eligibility for mortgage insurance. The FHA label has become recognized among buyers as a guaranty of quality and a protection against shoddy construction. Land planning, architectural design, quality, and workmanship have all been influenced for the better.

5. The facilitation of the flow of mortgage funds was of primary importance in the early years of FHA operations, when the thawing of the mortgage market was requisite to the recovery of building activity. The guaranty feature encouraged new lending and the standardization of the mortgage instrument with the support of the government through FNMA

and RFC, to be discussed later, gave rise to a secondary market, which facilitated the shifting of investment capital to the points of need

6. Claims have been made that the FHA has contributed or will contribute to the stabilization of the construction industry. No doubt the improvement of lending practices and the cushion of insurance protection are stabilizing influences. The FHA has demonstrated that it can aid in stimulating construction from a low level. There is some evidence that the FHA will be useful as a dampening influence in time of inflation and boom; for example, in its valuation policy in the postwar era of inflated costs, the agency has been reluctant to reflect current cost levels. It is still to be demonstrated whether FHA policy can and will be used to check overbuilding.

There has been a marked change in the administrative philosophy of FHA since the early years. Established as an instrumentality of recovery, and equipped with powers adjusted to both immediate ends and reform objectives, the agency early assumed leadership in the house construction field and in home financing. It was an agency of public policy first and an insurance company second. Today this order appears to be reversed. It is the stated policy of FHA to maintain the integrity of the mutual mortgage insurance fund at all costs.⁷⁶

Rental Housing—Secs. 207, 210, and 608. The drafters of the National Housing Act intended that the principal of mortgage insurance should benefit persons of low income through its application to rental housing financing. Under Sec. 207, Title II, rental housing projects sponsored by limited-dividend corporations set up under FHA regulations and supervision were eligible for mortgage insurance on loans up to 80 per cent of the value of the project. The mortgage interest rate is currently limited to 4 per cent, plus 0.5 per cent mortgage insurance premium. The term of loan runs to 30 years or more. A 6 per cent return on equity is permitted and the schedule of rents must be approved by FHA. The insurance features are substantially the same as under Sec. 203.

As the plan has actually operated, the results have been disappointing in both volume of housing built and income level of groups served. By the end of June, 1944, 361 projects had been built, providing a total of 36,000 dwelling units and involving insured mortgages totaling originally 150 million dollars. The rents in these projects, with few exceptions, were within reach of only the upper segment of the population in terms of income. The projects averaged about 120 units in size and in 80 per

⁷⁶ See the statement of FHA Commissioner Ferguson, Hearings before the Subcommittee on Housing and Urban Redevelopment, U.S. Senate, 79th Congress, S. Res. 102, part 6, p. 1480.

cent of the cases were two- and three-story walk-up developments of the garden type with average rents of about \$55. A very high proportion of the projects were sponsored by operative builders, who supplied what equity capital was needed and secured the full 80 per cent insured mortgage from a bank or insurance company. About two-thirds of the projects were built in the two year period, 1938 to 1939. It would appear that equity capital is not attracted in large volume to this type of investment, where the financial risk is relatively high because of the narrow equity and where returns on equity are restricted by law and regulation. The evidence suggests that the incentive that led to most of the projects was immediate profit for builder, landowner, or promoter rather than the expectation of a long-term investment return. This hypothesis is substantiated by the sharp drop in number of projects after the 1938 amendments to the act, which greatly restricted the opportunities for overcapitalization.

The number of foreclosures of insured rental projects has been under 20 and the net loss to the insurance fund only nominal. In general, the projects have been very profitable, with the result that about one-half of the sponsors have been able to refinance their projects with uninsured mortgages to eliminate the mortgage insurance premium and to escape the restriction on dividends and the FHA regulation of rents. Perhaps the most important contribution of this FHA rental housing program under Sec. 207 has been the demonstration of a garden type of multifamily development, without congestion and in outlying locations, which is both comfortable for the tenants and profitable for the landlord.

Since the beginning of the war rental housing under Title VI, Sec. 608, has replaced all Sec. 207 activity. Mortgages up to 90 per cent of the value of the projects are eligible and, under the amended provisions for postwar use, there is a limit to the mortgage amount of \$1,800 per room. There is no need to demonstrate "economic soundness" and restrictions on dividends and other continuing regulations by FHA are eliminated. In the postwar version, preference to warworker tenants has been replaced by preference to veterans. Through 1945, the number of project mortgages insured under Sec. 608 stood at 486 involving mortgages totaling 164 million dollars and providing 38,000 dwelling units. The use of this device since the end of the war is shown by the increase of 34,000 in dwelling units covered in project applications from July 1, 1946, through March, 1947, and the growth in the rate of applications for insurance during early 1947 to the level of 14,000 dwelling units to be provided in projects submitted in April.

The contribution of Sec. 608 to the solution of the war housing problem

was not great, but it may play a more important role in the postwar era. It has been FHA policy to push the rental housing program, and, to the extent that entrepreneurial as well as mortgage risks are assumed by the government, it will bring forth needed rental housing production.

Title III—Federal National Mortgage Associations. The National Housing Act authorized the establishment by private capital of financial institutions that might purchase FHA-insured mortgages out of paid-in capital and the proceeds of debentures sold in the general investment market. The objective of this provision was to provide machinery for the free flow of funds into the mortgage market wherever needed and to create a secondary market for insured mortgages where the originating institutions might dispose of mortgage holdings when in need of cash.

In spite of later liberalizing amendments to Title III, no private associations have been formed. In 1938, the Federal National Mortgage Association was formed with capital provided by the RFC. The primary purpose was to furnish a secondary market for the 90 per cent mortgages on new owner-occupied homes authorized by the 1938 amendments to the National Housing Act in order to encourage lending institutions to make such loans. During the first 2 years of operation, FNMA purchased 35,000 mortgages in the amount of 141 million dollars. The gradual development of a private secondary market for the 90 per cent loans resulted in a gradual decline in the volume of FNMA purchases to less than 1,000 in 1943. The FNMA then began to sell off its holdings into private hands, disposing of two-thirds of its mortgages in the year 1943. A few FHA-insured mortgage loans on rental housing projects were purchased by FNMA under the provisions of its charter; six projects were involved with mortgages totaling 3 million dollars.

FNMA may be counted as a successful operation. During the few years of activity it provided a secondary market for insured mortgages of a kind, 90 per cent and 25-year term, which was not yet established in the minds of many mortgage lenders as a fully acceptable type of investment. As confidence developed and as institutional investors absorbed all offerings that originating institutions wished to shift, FNMA virtually withdrew and sold off its mortgage holdings.

Secondary Market for FHA-Insured Mortgages. The activity of the FNMA discussed in the previous section must be viewed in its relationship to the development of a private secondary mortgage market and to the activities of the RFC Mortgage Company. One of the objectives of the National Housing Act was to establish a standardized and readily salable mortgage instrument that could be freely traded. Such a device, it was hoped, would facilitate the flow of mortgage money from surplus-

capital areas to other regions where investment funds were inadequate.⁷⁷ It had been characteristic of mortgage lending that the market was local, with mortgage terms differing in accordance with local custom and tradition. Lacking uniformity in appraisal standards and methods of investment risk analysis, lenders were inclined to insist on a firsthand knowledge of the mortgage security.

The introduction of the FHA-insured mortgage with its relatively standardized terms and the uniform system of appraisal and risk analysis employed in the administration of the mortgage insurance scheme did not immediately lead to the development of an extensive private secondary market. The FHA plan was new, and, in spite of the insurance feature, lenders were slow to accept high percentage, long-term loans as sound. Thus in 1935, the RFC Mortgage Company began purchasing insured mortgages on new homes as an aid to the encouragement of house-building activity. For the years of 1935 to 1936, some 10 million dollars in mortgages were acquired, or about 16 per cent of all insured mortgages purchased from originating institutions during that period. The volume and proportion of purchases increased in 1937, and in 1938 the FNMA began operations. From that time, both agencies were in the market, with the RFC Mortgage Company buying mortgages on homes built before 1937 and, later, Title VI loans. FNMA restricted its purchases to mortgages on new small homes. Insured mortgages were purchased by both agencies at par and accrued interest from any approved mortgage institution. The originators continued to service the loans and are compensated by an annual service fee of 0.75 per cent of the face value of the mortgage. At a later date the RFC engaged in the purchase of GI loans guaranteed by the VA under the Servicemen's Readjustment Act of 1944; purchases in 1946 amounted to \$2,248,000.

By the end of 1945, the two agencies had purchased 444 million dollars in FHA mortgages or one-eighth of all purchases of insured mortgages during the previous decade. Resales of purchased mortgages had amounted to 320 million dollars or nearly three-quarters of the purchases. At the end of 1946, total purchases were 478 million dollars or about 5 per cent of the total of mortgage insurance written by FHA. The authority of RFC to purchase FHA and VA mortgages was terminated June 30, 1947. In 1948, FNMA was authorized to purchase VA- and FHA-insured mortgages on a limited basis. Lenders could sell only 25 per cent and

⁷⁷ See "Secondary Market for Insured Loans," *Insured Mortgage Portfolio*, Third quarter, 1946, p. 20, for an excellent discussion of this subject. See also Husband, William H., and Ray A. Anderson, *Real Estate Analysis* (Chicago: Richard D. Irwin, Inc., 1948), Chap. 22.

later 50 per cent of their portfolios of mortgages made after Apr. 30, 1948, on single-family houses.

The private secondary market for insured mortgages developed steadily through the years following the introduction of the FHA plan. The amounts of mortgages transferred reached an annual peak of nearly 600 million dollars in 1943 and then declined to between 400 million and 500 million dollars in the succeeding 2 years. Since the beginning of 1935 through 1945, about 3.5 billion dollars were transferred. Among the private institutions, commercial banks accounted for 35 per cent of both purchases and sales. Insurance companies acquired nearly one-half of all purchased loans and mortgage companies accounted for nearly half of all sales. Savings and loan associations did not participate extensively in the secondary market activity; savings banks were more important as buyers than as sellers. Many of the mortgage companies that shared so largely in selling mortgages were but brokerage houses, in effect, making loans for sale and profiting from the premiums in price that could be secured and from the servicing fees, which yielded a good profit when a sufficient volume of loans had been accumulated. The desirability of insured mortgages led to a bidding up of the price of these securities until premiums of 3 and 4 per cent above face value and accumulated interest were common during the early postwar years.⁷⁸

Guaranty of Home Loans to Veterans

Among the benefits provided for veterans in the Servicemen's Readjustment Act of 1944 was the guaranty or insurance of home loans by the VA. The effect of these provisions (as amended in December, 1945) was to permit home purchase with little or no down payment.⁷⁹ Two plans were opened to the veteran. One scheme involved the guaranty or insurance by the VA of a first mortgage, but with the obligations of the United States as guarantor limited to the amount of \$4,000 and to 50 per cent of the indebtedness. The interest rate is limited to 4 per cent and the term of the loan to 25 years.

The second plan involved the guaranty by VA of a second mortgage, which must be in combination with an FHA-insured first mortgage and which might not exceed 20 per cent of the cost or purchase price. This second mortgage might be guaranteed up to \$2,000 by VA. Thus, with an 80 or 90 per cent FHA-insured loan, the veteran was often able to

⁷⁸ For additional data on the secondary mortgage market see *Housing Statistics Handbook*, Housing and Home Finance Agency (Washington, D.C.: U.S. Government Printing Office, 1948), Chap. 5.

⁷⁹ *Federal Home Loan Bank Review*, April, 1946, pp. 193-196.

finance 100 per cent of the purchase price of a home. In order to encourage lending institutions to participate in the GI loan plan, the RFC engaged in the purchase of guaranteed loans.

One of the primary administrative problems of the VA guaranty program has been the appraisal of properties that veterans intend to purchase. The early confusion over the interpretation of the basic criteria of "reasonable normal value" contained in the original act resulted in a slow start for the program. The amendments of December, 1945, revised the definition of value by removing the word "normal." Thus appraisers were constrained to search for "reasonable value." This deletion had the effect of releasing appraisers from the necessity of considering long-term value for use and investment purposes and permitted appraisals that reflected current market conditions and current cost levels. Appraisers were originally appointed by VA; later, to speed up processing, they were selected from a VA-approved panel by the lenders; and in January, 1947, the panels were abolished and VA resumed the appointive function. The action of VA in reassuming control over appraisers was in part required by the lack of restraint on the part of some appraisers selected by the lenders when the interests of the lender, the appraiser, and the veteran appeared to call for a liberal interpretation of "reasonable."⁸⁰

The VA home-loan program was slow in gathering momentum. For the first 5 months, applications remained below 2,000 per week. With the amendments and new regulations that became effective in March, 1946, there came a spurt in activity, which pushed applications up to a level of 50,000 per month by fall. This rate declined somewhat during the spring of 1947. By May, 1947, a total of 793,000 applications had been received and 677,000 loans had been closed in the amount of 3.8 billion dollars.⁸¹

The significance of the GI loan is not to be underestimated. The volume of loans has been great enough to leave a distinct mark on the mortgage and real estate markets. The easy credit available to the veteran has encouraged home purchase by young families who in more normal times would have remained as renters during the early and less stable stages of their family life. In face of the extreme shortage of rental units, the veteran has been enabled to acquire existing and occupied housing through purchase and in the process has evicted the current tenants and has removed a rental unit from the market. The startling increase in the proportion of home ownership since the war is in large

⁸⁰ *Federal Home Loan Bank Review*, January, 1947, pp. 101-104.

⁸¹ *Federal Home Loan Bank Review, Statistical Supplement*, 1947, p. 25, Table 25.

part the result of easy credit for veterans. The widespread home purchase by veterans has contributed greatly to the accelerated activity in the real estate market. This speed-up in turnover, plus the ease of financing home purchase at current prices, has given impetus to the inflationary spiral in home prices. Some veterans took advantage of the GI loan to acquire property for quick turnover at a handsome profit. There is no question but that the intent of the Congress has been realized—to give to the veteran an advantage in the housing market through credit up to 100 per cent of the cost of acquisition of a home. But there is also little doubt that the day of retribution will come when economic conditions are less favorable and when many of the veteran home owners will find their thin equities wiped out and their mortgage payments too heavy to carry.

CHAPTER 10

URBAN LAND MARKET FUNCTIONS AND ORGANIZATION

Up to this point, our discussion has been directed at the elements of demand and supply, for they are the dynamic forces in the interactions of the urban land market. We have considered the physical and institutional nature of land, the factors of demand for the various services of land that are the expression of urban activities, and, on the supply side, the procedures of production that are employed in the conversion of area on the earth's surface into usable space. The financing of production and the financing of ownership have been described.

We are now to examine the interactions of the forces of demand and supply. These interactions constitute the real estate market; their effect is to produce usable space that is sufficient and appropriate for the activities of the community, to distribute existing space, to establish prices and rents, and to establish general spatial relationships among the urban land uses. It is the interaction of market forces that determines the nature of the utilization of each plot of land, the extent and character of capital improvements to the raw land, and the point in time when the space is brought into use.

The Market Concept

The urban land market is an integral part of the contemporary private-enterprise system, which is rooted in individualism and which functions primarily through the pricing mechanism of our modern exchange economy. For most commodities and services there is no *single* market place where bids and offers are made and transactions are consummated; only in such exceptional cases as the New York Stock Exchange or the Chicago wheat market are the predominant forces of demand and supply focused at a single point.

Economists understand by the term Market, not any particular market place in which things are bought and sold, but the whole of any regions in which buyers

and sellers are in such free intercourse with one another that the prices of the same goods tend to equality easily and quickly. . . . Thus, the more nearly perfect a market is the stronger is the tendency for the same price to be paid for the same thing at the same time in all parts of the market. . . .¹

The degree to which commodities and services are homogeneous, readily and exactly describable, in widespread demand, and readily transportable will determine the strength of the tendency toward a uniform price.²

In a broad sense, all units of all goods and services are in the same market competing with each other for the consumers' dollar, or, viewing it in a slightly different way, consumers, in allocating their incomes in such a way as to derive the same amount of satisfaction from each marginal dollar spent, compete with each other for all the units of all the goods and services available to them. As one writer puts it,

Ultimately all commodities compete with each other for the consumer's money. In fact, the relation is much closer than is generally recognized. Food products compete directly with automobiles *in the same use*, in so far as each is purchased to maintain social position or make a display. . . . Outside a certain undefined range of similarity, partly determined by the accident of names, competition is more commonly called substitution; and perfect substitution . . . is perfect competition. In this sense, competition is universal; every commodity has substitutes. . . .³

In the general market for all goods and services, in the wheat market, or in the urban land market, the striving of consumers to maximize utilities or satisfactions results in the registering of consumer preferences, the establishment of price, and the activation of effective demand to the end that goods and services are made available in appropriate quantity and quality and the products of economic activity in the form of wages, interest, profits, and rent are distributed to the participants. To the extent that market activities fail to yield balanced and satisfactory results, the market may be said to be unstable and imperfect.

The Commodity

At an earlier point we discussed the physical and institutional aspects of the commodity that is traded in the urban land market. The physical basis of the utility of raw land is the support and space that it provides for the activities of man, the structures he occupies, and the artifacts he

¹ Marshall, Alfred, *Principles of Economics* (London: Macmillan and Company, Ltd., 8th ed., 1930), Book V, Chap. I, pp. 324-325.

² *Ibid.*, p. 326.

³ Knight, Frank H., *The Economic Organization* (Chicago: University of Chicago Press, 1933), pp. 94-95.

employs. Physically, space is limited, immobile, indestructible, and geographically heterogeneous; a given physical unit of the earth's surface cannot be moved or destroyed; no unit of space is identical with any other in terms of physical characteristics. But these physical characteristics must be interpreted in terms of their economic implications. In a sense, this entire volume is devoted to such an interpretation. It is in the market process, however, that the essential economic characteristics of land are revealed. Thus, as we consider the urban land market functions in this chapter, it is appropriate to reconsider the physical characteristics of land and to view them as economic factors in the functioning of the market.

The classical economists considered land and capital as distinct factors of production. This subject will come in for attention in a later chapter, but at this point it will be well to express the view that there is little value and small validity in such a distinction, though we shall find it convenient to reflect the differences in origin in the continued use of the two terms. On the subject of the differences between land and capital, one writer says,

What we mean by land in practical life is something which admittedly consists very largely of the accumulated result of human effort, and accordingly it is usually regarded as capital, the term "land" being reserved for the original and inalienable properties of the soil, and these it has been impossible to separate. Just where we have an area of the earth's surface which, physically, owes little or none of its value to anything that has been done to it or on it—for instance, a bare site in the center of a great city—we find that its value depends more than ever upon capital, that is to say, accumulated effort. Only it is capital that has been expended not upon the site itself but upon the surrounding areas. Land, therefore, economically defined cannot be considered in isolation from capital. . . . Therefore, the distinction between land and capital, which it seems difficult or impossible to draw, would be theoretically worthless if drawn.⁴

Another question is whether or not the fact that the total supply of land on the earth's surface is fixed for all time gives to land some unique economic characteristics. While the surface of the world may be fixed, the part of the surface accessible to man changes in magnitude and it is the latter that is important in an economic sense. Further, for any individual entrepreneur the supply of land is only limited by the price he is willing and able to pay.⁵ Again, as some writers put it, "area for eco-

⁴ Wicksteed, Philip H., *The Common Sense of Political Economy* (London: George Routledge & Sons, Ltd., 1933), vol. I, p. 365.

⁵ Davenport, H. J., *The Economics of Enterprise* (New York: The Macmillan Company, 1913), p. 169.

conomic purposes is always area for a specific use and when so considered is not a fixed expanse, at least not until this particular use has absorbed the entire earth's surface."⁶ Area in one use can be transferred to another use if the price paid for it in the latter use is greater than that paid in the former. Or where the price to be paid is high enough, usable space can be manufactured out of swamps and lakes or area can be created by building into the air through the use of capital and labor.⁷ Furthermore, "expanding knowledge . . . or improving transportation . . . may function technologically as substitutes for land. Bettering transportation is more land."⁸

The economic significance of the immobility of land has been the subject of speculation. Economically speaking, "even were the immovability of land a fact, it would be irrelevant. But it is not even a fact. . . . Many of the improvements made upon land . . . are equally irremovable as the land itself. . . . On the other hand, by carting loam or by grading . . . to say nothing of the action of wind and tide and wave, the seeming fixity of land is appreciably disturbed."⁹ In this respect land does not differ much from many other economic goods. But even more important is the fact that in the economic sense land is mobile to the extent that it can move from one use to another depending upon the price that each use is willing to pay for it. Thus, it can move from where it is plentiful to where it is scarce, in economic terms.¹⁰ Another writer says that "practically all lands and all other instrumental goods are mobile for the purposes of the individual owner in the sense that they can be realized on in the market,"¹¹ that is, the property can be sold and converted into capital, which then can be combined with other factors yielding a greater return than when invested in the property.

No unit of space is identical with any other unit in terms of physical characteristics. There are differences in size and shape of parcels, in fertility, and in location. In urban areas, particularly, we shall see that the quality of location or situs is an important determinant of economic value.¹² Each parcel of land occupies a unique physical relationship with every other parcel of land. Because in every community there exists a

⁶ Ely, R. T., and G. S. Wehrwein, *Land Economics* (New York: The Macmillan Company, 1940), p. 54.

⁷ *Ibid.*

⁸ Davenport, *op. cit.*, p. 170.

⁹ *Ibid.*, p. 168.

¹⁰ Johnson, Alvin Saunders, *Rent in Modern Economic Theory* (New York: The Macmillan Company, 1902), p. 127.

¹¹ Davenport, *op. cit.*, p. 169.

¹² Dorau, H. B., and A. G. Hinman, *Urban Land Economics* (New York: The Macmillan Company, 1928), p. 167.

variety of land uses, each parcel is the focus of a complex but singular set of space relationships with the social and economic activities that are centered on all other parcels. To each combination of space relationships, the market attaches a special evaluation, which largely determines the amount of the bid for that site which is the focus of the combination. Thus, certain locations are more highly valued for residential use than other sites because of greater convenience to shops, schools, centers of employment, and recreational facilities. Corner locations command a higher price for certain types of retail use because of greater convenience to streams of pedestrian traffic.

Like any other commodity, locations of various qualities possess economic value because such sites are scarce relative to the demand for them. The differentials in quality, be it in physical characteristics or situs, are of the same significance as the qualitative differences among various units of the same commodity or among all commodities; these differentials are the basis of differential price offers representing differential utilities to prospective consumers. For urban land, the economic significance of the purely physical site differentials is ordinarily very small, whereas the ecological site differentials are of prime importance.

The institutional aspects of the commodity, land, have already been set forth. The significant point in our consideration of the land market is the variation in the combinations of rights that are traded; one aspect of this variation is the complication of the commodity and the division into submarkets for both rented and owned residential space, with more or less free movement of demand and supply between the submarkets.

Market Functions

Distributing Existing Space. In returning to the subject of the functions of the urban land market, we shall look first at the function of distributing existing space. Our study of the supply characteristics of the real estate market has established the fact that supply reactions are relatively sluggish and that adjustments of supply to changes in demand are slow. Thus, when there are sudden changes in demand, the market mechanism acts to bring about changes in the nature or intensity of the utilization of existing space before any appreciable increase or decrease can be made in the total amount or quality of the space supply for the use that demands it. For example, where there is an increase in the number of families seeking housing accommodations in a community, the pressure of effective demand on a fixed supply will result in a reduction of vacant units, followed by an increase in rents and prices. This increase in price will have several effects, all of which tend to increase

still further the intensity of use of the existing space; families with low incomes and small effective demand will no longer find it possible to maintain their present rental quarters at the higher rent and will make adjustments either by taking in roomers, sharing their dwellings with other families, or moving to less commodious and less expensive quarters.¹³ In some cases, families from the middle and even the upper income group will be induced to rent rooms by the attractive rental rates resulting from the shortage.

Decreases in demand bring about a less intensive use of existing space. In a community that is losing population, the number of vacant dwelling units will increase, more homes will be offered for sale, and prices and rents will tend to decline. Families that are sharing dwellings can afford to undouble, with two families in separate units where one unit had been serving both. The economic impulsion to take in roomers will be reduced. Families in crowded quarters will be able to afford more commodious housing without increasing their costs of shelter. Thus, in the case of reduced demand as well as increased demand the relative elasticity of demand for housing and the relative inelasticity of additions to supply operate to change, as an initial reaction, the intensity of the use of existing space.

Somewhat the same kind of reactions occur with changes in the levels of family incomes. Increased income leads to a rising standard of living, including housing. With the quantity of demand and supply assumed to be constant, the effect of rising incomes is to move families upward in the quality scale of housing. The degree to which this upward movement will occur is a function of the level of income, the extent of the increase, and the income elasticity for housing, *i.e.*, the relationship between increase in income and the proportion of the increase in income that is spent on housing. This movement will be checked when the existing vacancies are absorbed in the upper ranges of the market and prices and rents rise as a result of the bidding for a limited supply. Another force tending to check the shift into the upper quality ranges of the supply is the increase in vacancies in the lower ranges and the consequent softening of prices and rents; thus the units of lower quality, at lower prices, become relatively better values than the higher grade units with prices and rents unchanged or increased by the strong demand.

When family incomes are declining, the shift is into the lower quality ranges of the existing supply. The downward movement is checked as demand pushes against the lower limits and prices stiffen; at the same

¹³ Weimer, Arthur M., and Homer Hoyt, *Principles of Urban Real Estate* (New York: The Ronald Press Company, 1939), p. 109.

time prices in the upper levels tend to decline with declining demand, and some householders find that they can maintain their standard of housing in spite of reduced income.

Although the foregoing illustrations were drawn from the housing market, the same general reactions are found to occur in the markets for nonresidential space. A decline in demand with supply held constant will bring about lower rents and consequent shifts to the more advantageous locations with marginal locations left vacant. Lower rents also permit a more liberal use of space. An increase in demand will stiffen rents and cause some contraction in the use of space. However, the elasticity of demand for nonresidential space probably is less than in the case of housing.

Adjusting the Supply of Space. In the short run, the market functions tend to redistribute the existing supply of space in accordance with changes in demand. But the final effect of changes that establish new and continuing levels of demand is to bring about increases or decreases in the available supply. We shall see that increases may be substantial in comparison with reductions in supply.

In discussing the market readjustments in the use of existing space, the analysis involved the market factors of demand, supply, vacancies, prices and rents, and family incomes. In considering changes in supply, we must add one more factor—costs of production.

When the pressure of demand continues to push against supply, vacancies decrease and prices and rents rise. At some point, prices and rents on existing properties reach a level that makes it attractive for producers and investors to enter the market. Builders are able to sell their products at a price that will yield a profit in competition with existing space. Investors find that rental yields are attractive relative to capital investment as determined by costs of construction. Thus new construction is undertaken and the market is supplied with additional space. New construction is checked or stopped by a number of forces, often working together. If the production of new space overtakes the increase in demand, vacancies will begin to appear, first in existing properties, and prices and rents will soften. It will become more difficult to dispose of new units in competition with existing units at lower prices. Thus the prices on new units will be affected and will ultimately fall below the level at which manufacture and investment are profitable.

Changes in the costs of construction influence the rate of new construction. When building is active in response to demand pressures, the same pressures are transmitted to the participants in the building process, with the result that costs of construction tend to rise. If costs rise to a point that necessitates a selling price that is above the price for existing

properties of comparable quality, building will be checked. Particularly in housing, the market narrows rapidly as price advances. Since the downward adjustment of costs is slow relative to upward changes, building may stop completely before the many cost elements in the construction process have reacted. However, unless cost increases are drastic, new construction is not likely to be brought to a halt until there is a reasonably close adjustment between demand and supply. So long as a shortage continues, prices and rents on existing units will be sustained at relatively high levels approaching the price of new units.

It is possible that, as a result of the efficiencies of large-scale production or through technological advances in construction methods, reductions in costs of building could be attained during a period of a high rate of production. If the savings were reflected in the price the result would be to broaden the market for new units and to sustain building activity for a longer period. However, in face of a strong demand, the incentive to pass on the savings would be weak and producers would tend to maintain prices and retain the larger profits. Because of the attractive profit potential, additional producers would be drawn into the market, and the supply would finally meet or exceed the demand. Producers would be forced to cut prices in competition with each other for a declining demand, and the price would drop until it reached the level of costs. Thus, in the end, the benefits of the cost reductions would be passed on to the user, but only after most of the market demand had been satisfied.

Changes in the level of family real incomes have an influence on the adjustment of space supplies. When real incomes are declining, assuming the quantity of demand to be constant, there is no pressure for new house construction. But when the level of incomes is rising, even though the number of families is not increasing, construction may be encouraged. As explained in the previous section, the tendency is for families to push upward in the scale of housing quality. Assuming a normal adjustment of demand and supply, this upward push will soon absorb vacancies in the upper levels of the market, prices and rents will rise and new construction will be encouraged. Now the contour of the rent-value distribution of the entire supply of existing dwelling units is skewed, with the highest frequencies occurring in the \$10 to \$30 range on a 1940 basis (see Chart 6). The families pushing upward along the scale from the large group of lower-middle rents, will move into a price range where the supply is smaller than in the price range from which they are moving and so on up the scale from the peak in the distribution. This new demand-supply relationship may support a substantial volume of building before all families have accomplished an upward adjustment in housing quality and before the effect of the vacancies at the bottom of the market can be re-

flected in lower prices and rents in the upper levels where the new construction is taking place.

Price Determination. One of the main functions of the market for any commodity is the determination of price. Price or rent in the land market is the amount of money that is paid for the ownership or possession of

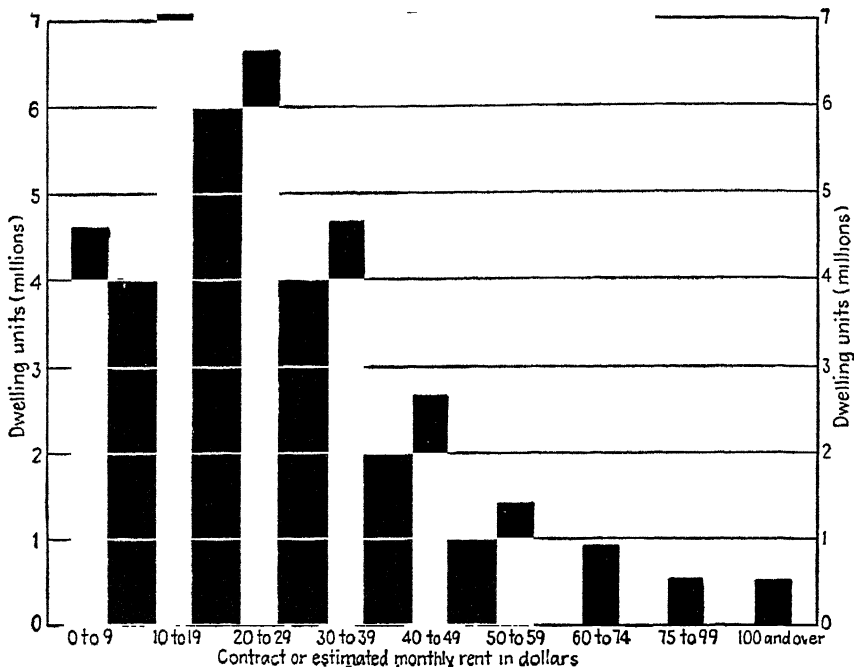


CHART 6. Distribution of dwelling units by value in the United States, urban and rural nonfarm, 1940. (*U.S. Census, 1940, Housing, vol. III, part I, Table A-1.*)

the services offered by real property. This amount is the product of the forces of demand and supply operating in the market and expressed in bids and offers. Theoretically, in the perfect market the market prices in all transactions relating to the same commodity are presumed to be identical. This law of single price tends to be operative in the urban land market, though we shall see later that it operates imperfectly. Price, rent, and value are to be the subjects of a later chapter.

Timing of Land Improvement. As a corollary of other market activities, the market functions to determine when vacant land shall be brought into use. When the forces of demand press upon the supply of usable space and new construction is required, it is through the mechanism of the market that prices and rents rise and the landowner or entrepreneur

is able to determine when it is profitable to improve vacant land. The interactions of the market also give indication of when it is advantageous to convert existing properties to new and more profitable uses.

Determining the Amount of Capital Improvement. The property owner must depend on an analysis of the various market indicators to determine not only the nature of the use for which his land can most profitably be improved but also the optimum capital investment in improvements.

Determining Land Use. It is through the interplay of market forces that the nature of the utilization of each parcel of urban land is finally determined. Thus, the land use structure of the city is fashioned, plot by plot, parcel by parcel, as a product of the urban land market. It is the competition of land uses in the market that distributes the use types in an arrangement that approaches the most efficient pattern. This subject will be considered in detail in the chapter on land utilization.

Market Organization

The Sellers. The great majority of properties offered for sale in the urban real estate market are owned by individuals who are not professional traders and who, with few exceptions, have no land holdings beyond the property that they are selling. This statement applies particularly to the housing market, but it is also true that a substantial proportion of commercial real estate is owned by persons who have little other property. Thus, real estate is offered for sale for the most part, with exceptions to be discussed later, by owners who are not in the business of trading in real property and who, during a lifetime, are involved in but two or three real estate deals. Thus it is characteristic that the seller is inexperienced and unfamiliar not only with market prices but with the mechanics of real estate transactions. This inexperience is often reflected in asking prices that are not adjusted to the current market levels or in unreasonable conditions that the seller imposes out of ignorance and fear that someone will take advantage of him. The situation may become even more complicated in cases where ownership is shared by several persons, such as a group of heirs. Another situation that creates obstacles to the efficient operation of the market is the case where the property is offered for sale by an agent who must consult with his principal at each step. Much property is controlled by absentee owners, so that the reaching of an understanding is hampered by lack of face-to-face contacts of buyer and seller and negotiations are prolonged by the necessity of dealing through the mails.

For the most part, there is little centralization of the offerings in the real estate market because of the scattered ownerships. In communities with well-organized real estate brokers, some aspects of a central market

are achieved. Large house-building organizations are able to offer a choice of new homes which can be inspected and which are subject to price comparison. In general, new houses are offered for sale on a more sophisticated and professional basis than is the case of older houses, since the sellers are engaged in the business of manufacturing dwellings and are familiar with the nature and mechanics of the market. They are aware of the value of exhibiting their product to the best advantage and of making it as easy as possible for the prospect to conclude a deal.

Financial institutions are at times the owners of all types of real estate, which is acquired through the foreclosure of mortgages. In periods of depression, they may own many properties that must be sold in order to recapture at least a part of the advance made to the former owner. Such institutions are experienced in the real estate market and conduct negotiations on a rational and businesslike basis.

It is probably true that only a small proportion of the houses that are offered for sale, over the full market cycle, are being sold in order to capture a profit. Of course there are some individual traders and syndicates in the market who make a business of buying and selling all types of property. Also, the opportunity to make an extraordinary profit when prices are high will induce some owners to sell. Builders are in business for a profit, but, for the most part, other sellers rarely are in position to time their offerings to the most favorable conditions. Nor did they acquire the properties in the first place with a view to selling at a profit. Home owners dispose of their properties in most cases when forced to do so by outside circumstances—the need for more space for a growing family, increased income permitting the conspicuous consumption of a more pretentious residence, decreased income requiring a reduction in expenditures for shelter, or a reduction in family size making it unnecessary to maintain a large house. Nonresidential offerings and income residential properties such as apartment developments are traded on a commercial and investment basis to a greater extent than homes. For all types of property, there are many offerings in connection with liquidating transactions—tax sales, the settlement of estates, or the disposition of foreclosed properties. During past land booms, subdivision lots have been platted in large quantities and offered primarily as speculative investments.

The offerings of residential accommodations to rent are various in type and origin. It has been estimated that one-half of all rented units in urban areas are old single-family houses.¹⁴ Since most of the old

¹⁴ Colean, Miles L., *American Housing* (New York: The Twentieth Century Fund, Inc., 1944), p. 208. The 1940 Housing Census reports that, for urban and rural non-

rented houses are owned by individuals who may own no other property except their own homes, it is apparent that there is a large number of individual landlords who are only incidentally in the business of renting housing space. In addition, there are many small holders of duplex and flat structures who are not professional landlords. On the other hand, the management of apartment-house properties is a business in itself and is often handled by a professional manager or a property management organization on an agency basis. Certain other types of property are similarly managed, including store and office buildings and some of the small residential structures owned by absentee landlords.

The Buyers. The same general characteristics will be found among the bidders on property as were found among the sellers—diversification and inexperience. The home buyer enters the market but once or twice during his lifetime and buys primarily for the satisfactions and use value that a home will afford. There are some traders who buy properties of all types with a view to resale at a profit in a rising market. Other buyers are investors who seek a reasonable and dependable return on capital invested in real estate. Most purchases involve a single parcel or structure, although there are mass purchases of building lots on a wholesale basis by operative builders and by speculators. During past land booms, the purchase of subdivision lots for speculation by individuals from all walks of life has been common. Finally, large-scale purchases are sometimes made in assembling a site for a new commercial development, housing project, or public building.

Tenants are relatively better informed concerning that part of the urban land market in which they are participants than are purchasers, particularly in the housing field. Tenants make more frequent changes of residence than do home owners and become more familiar with the transaction and the sources of market information. Furthermore, rental rates asked and actually paid are more widely known than sales prices, which are often considered to be private and confidential information. Renters of commercial and industrial property are usually well informed and experienced.

The Broker. We have already mentioned all the most important functionaries in the real estate market—the direct participants such as the various types of buyers and sellers, the trader or speculator, the builder and the investor. Among the market intermediaries is the property manager, as agent for the owner; we might have mentioned the

farm rented dwelling units, 41.4 per cent were located in single-family structures. See U.S. Census, 1940, *Housing*, vol. II, General Characteristics, part 1, p. 10, Table 4.

mortgage lender, since few transactions are consummated without his ministrations and approval, the trust company or fiduciary, which acts for estates and the beneficiaries of trust funds, and the lawyer, who is adviser or agent in many real estate transactions. But the real estate broker is the most ubiquitous of the various intermediaries

In a market where buyers and sellers are inexperienced, where transactions relating to comparable properties are infrequent, and where market price information is hard to come by, the broker performs a number of very useful functions.¹⁵ He aids the seller in finding a buyer with needs and tastes that are satisfied by the special characteristics of the property. The broker usually enters into a listing contract with the seller, whereby the seller agrees to pay a fee in case the property is sold within a stipulated period. If the contract is "exclusive," the listing broker receives his fee in case of a sale regardless of whether he actually negotiated the deal. Since the broker has a regular place of business, which he advertises, and since he attempts to secure as many listings of properties as possible, his office becomes a small marketplace to which prospective purchasers come to shop. Thus the broker also serves the buyer group by providing a convenient collection of information on properties that are being offered for sale. In communities where brokers are organized into local trade associations, a plan of broker cooperation is commonly used, known as the "multiple-listing system." This scheme involves the general exchange of listing information and in case of a sale the splitting of the commission between the listing broker and the selling broker. This device permits each cooperating broker to provide inquiring buyers with information on all properties listed with all brokers. Some broker groups formally exchange information on all sales that are made. In general, brokers are fairly well informed on the details of current sales even where there is no organized recording and analysis of sales information.

Because of his special knowledge of the real estate market, the broker is equipped to advise clients and to assist owners in securing the best price for their properties. He also is useful as a negotiator in securing the concessions from both buyer and seller that are part of the bargaining process. Very often the deal hangs on technicalities that the broker can iron out. After a preliminary agreement has been reached, the broker performs various services in closing the deal. He often draws up the necessary documents, assists in arrangements for financing the purchase, takes care of insurance problems, supervises the final signing of the deed, land contract, or lease, and even delivers copies of the

¹⁵ *Ibid.*, p. 217.

papers to the office of public record. In many cases, much of the detail of closing a deal is handled by attorneys, and in some communities it is common to use escrow agents for closing sales.

It is apparent that the broker and his services are particularly important to the proper functioning of the urban land market. Even though but a portion of all real estate transactions are handled by brokers, the stabilizing influence of the broker group permeates the entire market. Because of the unique opportunities for fraud and misrepresentation in real estate transactions, more than 30 states require the licensing of real estate brokers. The requirements are not high and the written examinations given to applicants in some states are not difficult. However, the license laws are effective in reducing the number of fraudulent transactions by bringing about a better understanding of the duties and obligations of the broker and of the practical advantages of ethical conduct and by providing a method, through penalties and the revocation of licenses, for preventing unprincipled persons from continuing to engage in brokerage activities.

The Transaction. There is more haggling and horse trading in the real estate market than almost anywhere else in our economy. It is customary for the seller to set an asking price well above what he is willing to take or expects to receive. The buyer, on his part, always makes an initial offer well below the asking price. There are usually several counteroffers and rebids before terms are agreed upon by both parties. Undue caution and obstinacy in the parties are often imparted by their lack of understanding and knowledge of the market. The terms of a sale include not only the purchase price, but the arrangements for payment, proration of taxes and insurance, date for settlement, disposition of fixtures, date of occupancy, and sometimes the terms of restrictions on the future use of the property. All these sale terms are incorporated in a sales contract, which, when signed, is binding on both parties.

In the case of a commercial lease, the terms of the agreement may become very complicated, covering involved rental arrangements and detailed statements of the rights and obligations of lessor and lessee. Long-term leases running for 99 years or more on downtown sites often give rise to protracted negotiations on such matters as termination provisions and periodic revaluation.

The indistinctness and obscurity of ownership complicate and retard the consummation of real estate transactions. The buyer must assure himself that he is to receive unclouded title and that he is aware of all unsatisfied encumbrances and all public and private restrictions. To secure such assurance requires a thorough examination of the public

records to trace the chain of title and the disposition of all transactions affecting the property. An abstract of title or summary of all such transactions is usually prepared, or, if it was prepared in connection with a previous deal, it must be brought down to date. The buyer's attorney must then examine the title to determine if any serious defects are present. If the title insurance plan is employed, the insurance company must go through the same process before a policy can be written. In a few communities, a much simpler plan of providing conclusive proof of ownership, known as "title registration" or the "Torren's system," is in use and avoids the necessity for title search.¹⁶

When the buyer is satisfied as to the title that he is to receive and when financing has been arranged and all the papers prepared for signature, the parties to the transaction are ready for the final closing of the deal. The papers are signed, the purchase price or down payment is passed, and the sales contract is replaced by a deed, which, in effect, conveys title from seller to buyer and stands as official evidence of the buyer's ownership. This document is immediately taken to the register of deeds and made a matter of public record. In some transactions, where payment is to be made in installments over a long period, the original sales contract is replaced by a contract for deed or land contract, which states the terms of payment and provides for the conveying of title when all or a stipulated proportion of the purchase price has been paid.

Not only is the typical real estate transaction complex and time-consuming, but it is costly. Where mortgage financing is involved, the closing fees may include the following: mortgagee's appraisal fee, cost of abstracting and opinion of title or title insurance, survey charges, attorney's fees, recording and filing fees, revenue stamps, notary fees, and others.¹⁷ These costs are borne mainly by the purchaser, although the seller shares variously as determined by local custom. Closing costs may run from 2 to 3 per cent of the purchase price of a single-family home.¹⁸

Submarkets. Institutionally the urban land market is not a homogeneous whole but rather is composed of a number of submarkets that are related to one another in various degrees of intimacy. The housing submarket is fairly independent, for the trading activities of house buyers and sellers have little or nothing to do with the nonresidential

¹⁶ Fisher, Ernest M., *Advanced Principles of Real Estate Practice* (New York: The Macmillan Company, 1940), pp. 42-45.

¹⁷ Colean, *op. cit.*, pp. 215-216.

¹⁸ *Ibid.*, p. 216.

land market. Some of the speculators, brokers, and builders may operate in all types of real estate, but this fact signifies no important interactions. On the other hand, many of the same underlying forces of demand and supply influence all parts of the land market; for example, population movements may give rise to increased demand for all types of property. Furthermore, all land use types are potential competitors for all urban sites, and the price paid for land for one use will influence the price of land for another and higher use.

The housing submarket is itself divided into the sales and the rental submarkets. Between these two sets of forces there is a close relationship. Buyers of housing space have the option of purchasing a home or renting and ordinarily make a careful comparison of the offerings in both fields. Single-family structures form virtually all the supply in the sales market and a large share of the supply in the rental market; the owners have the option of disposal by either sale or rent. Families are continually shifting from one tenure status to the other, depending upon income, family composition, relative levels of price and rents, and other factors.

Another segment of the urban real estate market is the land submarket. This segment deals in raw land that is ripe for subdividing and development and in prepared building lots for all types of urban land use. In terms of volume, residential lots are predominant. Sites for nonresidential structures and for multifamily residential structures are often provided by removing an existing building; to this extent, many locations already improved are effectively a part of the supply of building sites. Land for building purposes is a producers' good, for it is one of the raw materials out of which is fashioned usable space for man's activities. Thus the relationships between the land market and the remainder of the real estate market are generally indirect. When the consumer himself is the producer, as in the case of a family building its own home, the connection is more direct.

The markets for retail, wholesale, and office space are fairly distinct, as is the market for industrial space. The relationships among these markets are found only at points where these uses compete for space, which is infrequent. Furthermore, the cyclical fluctuations of these submarkets may often move together, since they are influenced by many of the same forces. Although a considerable proportion of the urban area is in public use, there is no public-land submarket of quite the same nature as the other submarkets. Public lands are not acquired on a commercial basis in many instances. Some public areas are donated, others are acquired by condemnation. However, public agencies often do acquire land by direct purchase; furthermore, the withdrawal of public

lands from the land supply and the prices paid for such lands do have an influence in other segments of the real estate market.

The building industry is not to be considered a part of the urban land market, although the two are intimately related. The market processes provide the indicators and guides that activate production and control its direction. The direct point of contact is found in the marketing activities of the builder.

Local Nature of the Market

The local nature of the urban land market is a highly important characteristic. According to Kiekhofer, "Markets may be properly described as the entire area within which the forces of demand for and supply of a given commodity or service interact in effecting exchanges and establishing prices."¹⁹ The most significant forces of demand and supply in the urban real estate market are predominantly local. The demand for space is the product of the need for habitation of the families in the community and for the housing of the industrial and commercial activities which provide the economic lifeblood of the area. The structures and improvements to the land are manufactured on the local sites, and, once complete, they are permanently fixed in the locality. Market transactions take place within the community and are little influenced by market factors in other areas beyond normal commuting distance. It is true that local real estate markets are not insulated from the outside world for they are affected by national economic conditions, which influence the demand for space and which may impinge upon local production costs through the price of construction components that are imported. But in general, real estate markets are essentially independent and localized, and, though the framework of organization and the patterns of instability may be common to all urban land markets, there are marked differentiations in intensity and timing of market movements.

Market Imperfections

The classical economists devised the convenient notion of the perfect market, which they employed in considering the interactions of supply and demand. They conceived an idealized market situation in which the commodity traded was in the form of standard units of identical specifications, quickly consumable and readily transportable; the supply in the market could be increased quickly and in any amount; the buyers and the sellers were all-wise men who were guided in market decisions

¹⁹ Kiekhofer, William H., *Economic Principles, Problems and Policies* (New York: D. Appleton-Century Company, Inc., rev. ed., 1936, 1941), p. 384.

by enlightened self-interest; information on all bids and offers and on all transactions was immediately available to all traders. In real life, there is no perfect market and thus no perfect competition in the academic sense. Perhaps the closest approach is the wheat market or the stock exchange, though it is notorious that the traders are not all-wise.

Now the perfect market was self-regulating; it performed its functions with promptness and precision. The preferences of consumers were registered with exactitude and brought forth, on the supply side, the proper production in number, quality, and price. A shortage or a surplus was impossible in a market that reacted with such unreal sensitivity. Stability of prices and of market activity was inherent. Prices, wages, interest returns and profits were established with justice in proper relationship to the economic contributions of the several agents in the processes of production and exchange.

The mechanics of the real estate market tend to be essentially the same as in the perfect theoretical market, but, for a variety of reasons, the self-regulating reactions are sluggish. The economic laws that govern the market processes—the economic equivalents of the physical laws of nature—tend to be operative but the frictions are so great that the reactions are seriously delayed and dampened. The reactions of adjustment occur, but so sluggishly and imperfectly that the market is in a constant state of imbalance. We shall find as we delve deeper into this matter that the notorious instability of this market is basically the result of the interacting of forces of demand that are highly dynamic against forces of supply that are peculiarly static.

The self-regulating mechanism of the urban land market is handicapped by the nature of the commodity in which trading takes place. Each structure and each dwelling is a complex article, often custom-built, and possessing unique features. Physically, the units of space are not well standardized so that they are difficult to describe, grade, and compare. This variability is accounted for by the complexity of the structure, the many important features that are concealed from the eye or can be evaluated only by an expert, and the intangible yet important aspects of location—*i.e.*, the geographical relationships with other features of the landscape and other centers of social and economic activity. To a considerable extent, the complex and nonstandardized nature of the property unit is responsible for the dearth of dependable market information on bids, offers, and sales prices. There can be no single quotation relating to a precisely described and classified item, as in the stock market or the wheat market or the used-car market. Quotations are related exclusively to a specific property or dwelling space. The infrequency of transactions relating to accommodations that are

similar even in general features makes it difficult to assemble price data that can serve to guide the trader. The assembly and analysis of such data are particularly difficult for the typical inexperienced buyer or seller who enters the market but once or twice during a lifetime; it is only a little less difficult for the renter who is seeking the best value for his rent dollar. It is understandable, therefore, why the urban land market fails to match one of the prime characteristics of the perfect market—a uniform price for items of similar nature.

One aspect of the physical fixity of real property is the relative permanence of the design and facilities of structures of various types. For example, housing structures are designed to meet the family needs and pocketbooks of the original occupants; it is difficult and expensive to alter buildings once they are completed, so that they typically remain unchanged long after the original occupants are gone and the design and accommodations are no longer appropriate to the current demand. The fixed design of a house means that it is not readily adjustable to changing needs for space as the occupant family changes over the years in age and composition. Because structures are fixed in space and thus vulnerable to changes in the neighborhood and to alterations in the pattern of the community, the years bring changes in those utilities which the structure and environment join to provide.

Usable space is not an easily reproducible good. It is a highly significant supply characteristic that the productive processes and machinery of the building industry are sluggish in getting under way after a period of inactivity and that, once having attained a high rate of production, the industry tends to be carried by its momentum past the point of market balance. The amount of space available for occupancy, particularly in the housing field, increases with relative slowness even in times of active building. For example, during the active building year of 1941, some 722,000 units were added in urban areas. This increase amounted to only 2.4 per cent of the base housing stock of 30 million units in 1940. On the other side, housing is physically removed with reluctance, as illustrated by the fact that demolitions during the decade 1930 to 1940 averaged about 40,000 per year or only 0.13 per cent of the 1940 stock.²⁰ This fact again emphasizes the local nature of the market and the relative inelasticity of the supply; there is no interadjustment among localities, as occurs with respect to other commodities such as used cars, whereby surpluses are shifted to points of shortage.

²⁰ Ratcliff, Richard U., "Notes on the Recent Decline in Home Ownership," *The Journal of Land and Public Utility Economics*, vol. XX, no. 4, p. 376, November 1944.

The demand side of the market has been characterized by constant fluctuations in both quantity and quality. While fluctuating demand is not technically an imperfection of the market, when carried to the extremes found in the urban land market, this characteristic becomes a major contributor to general instability. Demands for all types of structure have fluctuated with the surges of the urban population movements, from the rapid urbanization of the twenties to the cessation of growth in the thirties back to the strong urban trend of the war and postwar period.

Demand is subject to change in quality as well as in quantity. Shifts in levels of income through depression and prosperity have a profound influence on demand. Not alone are movements to and from urban areas affected by general economic conditions, but also the kind of housing and other types of space that are called for.

Long-term social trends contribute to the dynamic nature of demand. As a community matures and the age distribution of the population becomes more heavily weighted with older persons, so there are shifts in the nature of the demand for the services of urban land. There are continual changes in the economic organization of society, in social functions and social values, and in technology, which have profound effects on demand. The geographical diffusion of industrial activity, the emergence of new industries, changing patterns of distribution, the increasing mobility of labor, the changing role of the family as a social institution, and the development of the automobile and the airplane, in various ways and degrees all are affecting markets with respect to the amount, the nature, and the location of space that is required.

It is peculiar to the market for commodities that have a long, useful life that supply may increase at the same time that demand falls off. In the perfect market, and in the market for goods that are quickly consumed, a decline in demand will result in reduced production; price will fall to a point just high enough to clear the market. In this manner, supply will be adjusted to fit the new lower level of demand. In the urban land market, a softening in demand will ultimately depress production, but an actual decrease in demand will, in addition, have the effect of increasing the amount of space offered in the market by reason of the increased number of vacant units that come into the effective supply.

Another obstacle to the free interaction of market factors is the legal complexity of conveying title to real estate. Not only is the process of transferring ownership a complex one, calling for professional advice, but it is likewise costly. Certain legal aspects of tenure also tend to delay market reactions. The movement of families back and forth

between the rental market and the home-owning market and readjustments within the rental market for all types of land use are inhibited by leases, which freeze rights and obligations for a specific period. Thus no readjustments are normally made until the end of the period, though market conditions may have changed.

Foreclosure laws that favor the owner in retaining possession of his property long after default upon his financial obligations also contribute to the sluggishness of the market. A factor that is perhaps even more effective is the emotional attachment that most families develop for their home. Thus, a man will sacrifice to retain possession of his home long after his occupancy becomes financially unwise and impracticable.

The control exercised in the market by mortgage lenders has, in general, served to check the forces of readjustment. In times of depression and inactivity, the caution of the lenders has been an obstacle to renewed building activity. In 1932 and 1933, the mortgage market was virtually frozen and artificial devices introduced by government were necessary to provide a renewed flow of mortgage money. At the other extreme of the cycle, mortgage lenders have, in the past, contributed to inflation and overbuilding. Competition among lenders has been so strong as to lead to overvaluation and overlending. The notorious mortgage bonds that financed the overbuilding of the apartment market in a number of large cities in the late twenties is an example of the influence of lenders. There is some evidence that at the present time overgenerous loans are contributing to the inflation of real estate prices.

It is said that the ownership of real property is exclusive but not absolute. Thus a property owner may exclude all other private citizens from his land or his home, but through zoning he may be restricted in the manner of use of the property. Through taxes he must share the proceeds of the productivity of the property, and under the power of eminent domain his property is subject to taking by a public body for a public use with just compensation. Building codes and safety and sanitary regulations control the design and quality and thus the cost of structures. Subdivision regulations and planning controls place limits on the platting of raw land. These limitations on ownership affect the value and salability of real property; they stand as restrictions on freedom of individual action and on the untrammelled interplay of market forces; they are market imperfections created for the public good. During periods of emergency such as the war, additional restrictions may be imposed. Rent control is an emergency measure that had a profound inhibiting influence in the housing market, for, after a time, rents fall out of balance with other prices and may not move freely toward an adjustment. The emergency limitations on construction during

the war is another example, for the intention was to artificially direct production to the types of housing that are considered socially desirable and to restrict construction that is considered less essential, such as commercial and industrial structures. Emergency limitations are, in time, relaxed, but the restrictions based upon the police power and the power of eminent domain have been gradually extended over the years.

This listing of the many imperfections that plague the urban land market and hamper its self-regulating mechanisms should not be interpreted to mean that the market is totally disorganized and unconventional. To the contrary, the normal reactions and tendencies are present, and various influences will, in time, have results that are generally predictable. However, in comparison with the markets for almost all other commodities, the urban land market is unique in the number and power of the limitations on the free interplay of supply and demand.

CHAPTER 11

THE HOUSING MARKET

In the last chapter we dealt with some of the basic characteristics of the urban land market as they apply to all types of land use. So important is the demand for and supply of housing that we are warranted in giving considerable space to certain special characteristics of this submarket.

The Housing Stock

The existing supply of housing is so great in comparison with annual increments through new construction that it exercises a major influence in the market. In 1940, the number of nonfarm dwelling units totaled 29,683,189. New construction during the succeeding 5 years has added $2\frac{1}{2}$ million units, with very few demolitions, so that the total housing supply as of the end of 1945 was approximately 32 million dwelling places.¹

The U.S. Housing Census of 1940 provides the detail on the characteristics of the housing stock. One-family dwellings represented 80 per cent of the nonfarm residential structures and nearly 60 per cent of the dwelling units. Two-family structures rank next in importance; apartment buildings providing for 5 or more families constitute only 1.2 per cent of all structures but supply 13 per cent of all dwelling units.

The predominant exterior material used in residential structures is wood, which is found in 77 per cent of the cases. Brick ranks next, with a percentage of 14.7. The median age of nonfarm dwellings is about 25 years. Table 48 shows the distribution of dwelling units by age and reveals the fact that 12 per cent are 50 years or more in age while 16 per cent are 10 years or less. The 10- to 20-year age group is the largest of the distribution, containing 26.5 per cent of all cases.

The facts dealing with the state of repair of residential structures

¹ The April, 1947, Census survey is the basis of an estimate of 32.3 million occupied dwelling units.

TABLE 46. NONFARM STRUCTURES AND DWELLING UNITS BY TYPE OF STRUCTURE, 1940

Type	Structures		Dwelling units	
	Number	Per cent	Number	Per cent
Total.....	21,781,550	100.0	29,683,189	100.0
1 family (without business).....	17,510,847	80.4	17,510,847	59.0
2 family (without business).....	2,466,950	11.3	4,933,900	16.6
3-4 family (without business).....	675,536	3.1	2,244,500	7.6
1-4 family (with business).....	645,600	3.0	925,275	3.1
5 or more family (with or without business).....	349,583	1.6	3,921,983	13.2
All others.....	133,034	0.6	146,684	0.5

TABLE 47. NONFARM RESIDENTIAL STRUCTURES BY EXTERIOR MATERIAL, 1940

<i>Exterior Material</i>	<i>Per Cent</i>
All materials.....	100.0
Wood.....	77.3
Brick.....	14.7
Stucco.....	5.3
All others.....	2.7

TABLE 48. NONFARM DWELLING UNITS BY AGE, 1940

<i>Age</i>	<i>Per Cent</i>
All ages.....	100.0
0-10 years.....	15.5
10-20 years.....	26.5
20-30 years.....	18.3
30-40 years.....	17.6
40-50 years.....	10.3
Over 50 years.....	11.8

and the provision of sanitary equipment indicate that a substantial share of our national urban housing stock is lacking minimum facilities. Only two-thirds of all dwellings are equipped with both private bath and flush toilet. Seventeen per cent of the units do not have running water and 14 per cent are in structures that have deteriorated to a point where major repairs are required. During the prosperous years since 1940, the physical conditions in most areas have improved some-

TABLE 49. NONFARM DWELLING UNITS BY STATE OF REPAIR AND SANITARY FACILITIES, 1940

Sanitary facilities	Total		Not needing major repairs		Needing major repairs	
	Number	Per cent	Number	Per cent	Number	Per cent
Total.....	27,723,008 *	100.0	23,787,627	85.8	3,935,381	14.2
With private bath and private flush toilet.....	18,399,826	66.4	17,095,311	61.7	1,304,515	4.7
With private flush toilet, no private bath	1,463,829	5.3	1,134,013	4.1	329,816	1.2
With running water, no private flush toilet	3,146,804	11.3	2,444,229	8.8	702,575	2.5
No running water in dwelling unit.....	4,712,549	17.0	3,114,074	11.2	1,598,475	5.8

* This figure is the number of dwelling units reporting on state of repair and sanitary equipment out of a total of 29,683,189 dwelling units.

what as householders were able to spend increased amounts on equipment, repairs, and maintenance.

Dwelling units of four, five, and six rooms in size represent 57 per cent of all nonfarm housing accommodations. Units of four rooms and six rooms account for about one-third of the total, nearly evenly divided between the two groups. Five-room units make up one-fifth of all dwellings. Units of three rooms or less constitute 27 per cent.

The value distribution of our housing stock is expressed in terms of contract rent for rented units and estimated rental value for owner-occupied dwellings. In 1940 nearly one-half of all units fell in the \$10 to \$29 range. Only 11 per cent of the dwellings had rental values of \$50 or more.

In 1940, 4.8 per cent of all nonfarm units were vacant and were for sale or rent; 1.7 per cent were vacant but not on the market, and 93.5 per cent were occupied. Of the occupied units, 41.1 per cent were owner occupied and 58.9 per cent were tenant occupied. By 1947, the

TABLE 50. NONFARM DWELLING UNITS BY NUMBER OF ROOMS, 1940

	<i>Number of Rooms</i>	<i>Per Cent</i>
All dwellings	100.0
1 room.		3.8
2 rooms.		8.5
3 rooms.		14.4
4 rooms.		18.4
5 rooms.		21.0
6 rooms.		17.9
7 rooms.		7.5
8 rooms.		4.5
9 rooms.		1.7
10 rooms.		1.1
11 or more.		1.2

TABLE 51. NONFARM DWELLING UNITS BY RENTAL VALUE

Rental value	Total		Urban		Rural nonfarm	
	Number	Per cent	Number	Per cent	Number	Per cent
Reporting on rental value.	27,307,198	100.0	20,279,149	100.0	7,028,049	100.0
Less than \$10.	4,364,946	16.0	1,663,894	8.2	2,701,052	38.4
\$10-19.	6,625,831	24.3	4,479,826	22.1	2,146,005	30.5
20-29.	6,247,149	22.9	5,146,873	25.4	1,100,276	15.7
30-39.	4,445,257	16.3	3,933,844	19.3	511,413	7.3
40-49.	2,518,652	9.2	2,287,461	11.4	231,191	3.3
50-74.	2,170,318	7.9	1,948,113	9.6	222,205	3.2
\$75 or more.	935,045	3.4	819,138	4.0	115,907	1.6

proportion of owner occupancy had increased to 53 per cent.² The density of occupancy in urban dwellings in terms of persons per room in 1940 is indicated by the fact that 82.4 per cent of the units contained one person per room or less; 10.5 per cent were occupied by from 1.01 to 1.50 persons per room, and 7.1 per cent had 1.51 or more persons per room. The April, 1947, survey showed 5.3 per cent of all occupied dwelling units with 1.51 or more persons per room.³ The proportion

² U.S. Bureau of the Census, special release, Feb. 24, 1948.

³ U.S. Bureau of the Census, *Current Population Reports*, Series P-70, no. 1, Oct. 29, 1947.

of dwelling units occupied by only one family in 1940 was 95.4 per cent, while 4.4 per cent of the units contained one extra or subfamily and 0.2 per cent contained two or more subfamilies.⁴ In 1947, 91 per cent of all families were living in separate quarters; 2.85 million households contained at least one extra family and another 1.6 million households included one or more lodgers.⁵

The Market for Building Lots

In an earlier chapter, it was pointed out that the production and marketing of building lots is usually carried on as an activity separate from the production of structures and the marketing of the final combination of land and building. This pattern is characteristic in the smaller communities and covers operations in the larger cities except where a large operator carries through the entire production process from raw land to finished structures. The building lot or subdivision market has been, in the past, all too frequently associated with excessive lot production and wasteful speculation. During the first 30 years of this century, subdivisions were platted to a great extent by inexperienced investors who sought to ride in on a land boom and by professional promoters and speculators who aimed to make a quick profit and then to move on. Only a modest share of all building lots were located in well-planned subdivisions developed by established and responsible local real estate operators.

Historically, there has been a close coincidence between fluctuations in subdividing activity and in general business conditions.⁶ The peaks have occurred in times of prosperity and the declines have been the accompaniment of depressions. The peak of activity in 1925 and 1926 coincided with the height of the building boom and as in previous land booms was accompanied by widespread speculation. Speculation was rife in both acreage and subdivided lots. A submarket in acreage transactions developed, in which agricultural tracts on the peripheries of urban areas were withdrawn from cultivation and often bought and sold a number of times before being subdivided. Subdividers who acquired acreage processed the land in varying degrees before selling

⁴ U.S. Census, 1940, *Population and Housing, Families*, Table 10, p. 28.

⁵ U.S. Bureau of the Census, *Current Population Reports*, Series P-20, no. 1, Feb. 11, 1948.

⁶ Fisher, Ernest M., "Speculation in Suburban Lands," *American Economic Review, Supplement*, vol. XXIII, no. 1, March, 1933. See also Monchow, Helen Corbin, *Seventy Years of Real Estate Subdividing in the Region of Chicago* (Evanston and Chicago: Northwestern University, 1939), Chap. 2.

the lots. Where the object was to sell to speculators and "investors," very little investment was made in improvements beyond a survey and the staking out of lots. Where lots were prepared for immediate use, all or most of the normal improvements were made and the purchasers were prospective home owners who expected to build soon or operative builders who acquired blocks of lots on which to locate new groups of houses.

The rate of subdividing up until the depression of the thirties had little relationship to the need for urban sites. It was customary for subdividing to anticipate utilization by some 30 years.⁷ It has long been a basic disability in the building-lot market that the market mechanism fails to keep demand and supply in adjustment. Production has been unduly sensitive to increasing demand, and land, because of an assumed propensity for precipitous rises in value, has been a favorite medium of speculation. Thus, subdividing activity has swung irregularly from low production to peaks of overproduction and speculation.

A few examples of the unused inventory of subdivided lots in metropolitan regions will suggest the magnitude of the problem that characterized most of the urban areas of the nation in the thirties. In Detroit, it was estimated that in 1939 there were approximately 450,000 unused building lots within Wayne County, or about 60 per cent of all recorded lots.⁸ In Cook County, Ill., in 1928, 55 per cent of all improved lots were vacant, and in the area outside of the city of Chicago, 69 per cent were vacant.⁹ In the state of New York, the ratio of vacant parcels to all taxable parcels was found to average 20.7 for 4 large central cities, 47.6 for 4 suburban cities, 48.5 for 50 villages, and 74.2 for 60 towns outside villages.¹⁰ It has been estimated that to absorb the unused lots in Ocean County, N.J., would require 1,627 years at the rate of urban growth of the period 1910 to 1930.¹¹

The incentive that led to the production of this staggering surplus of

⁷ Fisher, *op. cit.*

⁸ Ratcliff, Richard U., "The Detroit Housing Market," *Michigan Business Reports*, Bureau of Business Research, School of Business Administration, University of Michigan, 1939, p. 29. An estimate was made in 1930 that it would take 50 years to absorb the surplus of lots at the rate of the previous decade.

⁹ Simpson, Herbert D., and John E. Burton, *The Valuation of Vacant Land in Suburban Areas* (Chicago: The Institute for Economic Research, Northwestern University, 1931), p. 14, Table 1.

¹⁰ Cornick, Philip H., *Problems Created by the Premature Subdivision of Urban Lands in Selected Metropolitan Districts in the State of New York* (Albany, N.Y.: Division of State Planning, 1938).

¹¹ *Land Subdividing in New Jersey* (Trenton, N.J.: New Jersey State Planning Board, 1938), p. 19, Table 1.

subdivision lots was not normal, reasonable profit, but extraordinary, speculative profit. Producers were not professional land developers who gave time and thought to the quality of their product, but rather were a few land sharks and many amateurs whose objective was to get the lots on the market before it broke, with little regard for quality or utility. Lots were sold not to users but to speculators, who purchased on small down payments and who expected to profit by selling at a substantial advance in price to other speculators or to users. Subdivisions were financed on a shoestring by devious unsound devices. The complement of utilities—streets, sidewalks, sewers, water—were rarely completely installed, frequently were not paid for, and more often were promised without the intention or the financial capacity to make good the promise.¹²

The unwelcome effects of the last land boom, which occurred in almost all cities of the nation at one time or another during the decade from 1920 to 1930, are still discernible though time has greatly reduced their incidence and importance. Platted lots may be found for miles in every direction beyond the developed areas of all our large cities. During the boom, promoters predicted that in a few short years the growing city would envelop the most remote plats, and rash and unfulfilled promises of transportation facilities were made. Thus we find quantities of stranded lots, far beyond the periphery of the city and badly served with public transport. The continuing improvement of our highways and the ever wider use of private automobiles have increased the accessibility of these areas in an absolute sense, but have not offset their relative disadvantage as compared with the more than adequate supply of land in closer-in areas.

In the haste to exploit the boom market of the twenties, little attention was given to land planning. The traditional gridiron pattern was typically employed; blocks were laid out in sizes too small for the motor age; lots were often narrow, 20 to 35 feet, and of minimum depth. Either the plat was flat, open, and unattractive, or, where natural advantages were present, such as a rolling terrain, they were not exploited. Rather than a street system fitted to the contours of the land, the rigid, geometric pattern was laid harshly on hills and valleys. Too often the street system of the plat did not mesh with that of contiguous plats or with the city street pattern. Finally, far too great a proportion of the land along major highways was laid out for business use.

The reeling light poles and vagrant water hydrants that are unex-

¹² For a discussion of land speculation see Fisher, *op. cit.*, p. 152.

pectedly encountered in the penumbral areas of our cities give bleak testimony to dormant investments in service facilities. In a few cases, the full complement of utilities is present and paid for. But more often only the minimum facilities are there, or if installed, had to be carried by the municipality in the form of burdensome delinquent special-assessment taxes. In the outlying regions, rudely graveled roads, by now pitted and grass-grown, are the only remnant of the full facilities undoubtedly promised by the promoters. Too often lots were sold on contract subject to an underlying mortgage placed to finance utilities. Sometimes they were installed, sometimes not, but there were many cases of default on the mortgage and loss to the lot buyers. On the other hand, within the corporate limits of political subdivisions that provide water and sewer service, there are thousands of unused lots with these essential services at hand, many areas also provided with public streets, curb and gutter, sidewalks, and street lights. In the aggregate, the proportion of lots with the full utilities complement is not large.

Many of the subdivisions of the last land boom are inadequately protected from adverse influences by reason of lack of zoning or inadequate deed restrictions. The general protection of zoning against non-residential uses is not generally available in areas beyond city limits, and, where it is available, it is too often the case that zoning is not well enforced or that unreasonably large areas are zoned for business use. The deficiencies in deed restrictions stem in part from the lack of conformity in provisions for contiguous subdivisions, thus bringing high-grade and low-grade housing into undesirable juxtaposition. Another defect arises from the time limitations placed on the provisions, so that in many areas the restrictions are about to expire or did expire before any substantial amount of building was done. Finally, cost limitations were based on the high level of construction costs that obtained at the time of subdividing. Changes in the value per dollar that is obtainable at different stages in the cycle may make these limits inappropriate.

In general, then, the quality of a large share of the residue of subdivided lots from the speculative developments of the twenties is low, often too low to be acceptable to lending institutions. Because of the wide use made of mortgage insurance, the Federal Housing Administration has exercised an important influence in determining the acceptability of areas for lending purposes. Many areas fail to meet the minimum FHA location standards or rate so low that only the most conservative loans will be approved. The inability to secure financing in areas that are deficient in design, utility, convenience, or protection results in reducing the effective supply of building sites.

There were other defects in the supply of vacant lots that were produced prior to the depression. While there is no way of knowing the relative importance of this factor, it was common in many localities for large blocks of lots and for scattered single lots to be incapable of sale because of serious defects in title. These clouds upon title came about in a number of ways. In some cases entire subdivisions were affected by reason of a default in an underlying mortgage. Where foreclosure proceedings had not been instituted or completed, merchantable title could not be conveyed to lot buyers. When foreclosure had been effected, lots could not be sold until the period of redemption had expired. In some cases, the developing company failed and there was no active agency that could convey title. Even former purchasers under land contract could not secure a deed. Finally, much of the land was tied up because of defaults on the land contracts made with original speculative vendees whose interests were never foreclosed. These conditions still exist uncured in many peripheral areas today.

The bankruptcy of development companies and the obvious futility of holding land for price increases in face of combined factors of surplus and depression led to widespread default on obligations as heretofore described and to widespread tax delinquency. In many cases, accumulated taxes and penalties were in excess of the current value of the lots and often in excess of any conceivable future value. Thus, the owners, lacking the incentive to keep up taxes and in many cases being unable to pay by reason of reduced income, abandoned the land to the tender mercies of the city, township, and county treasurers. The process of liquidating these tax claims is generally well advanced throughout the country. In some areas, the market value of the lots has been so low until recently that the salvage from tax sale was insufficient to meet the costs of the sale. Elsewhere, tax titles have been sold, but the land cannot be safely put to use until the period has expired that allows for redemption by the owner. In some states, the land has reverted to the state and is being sold off for what it will bring or is being put to public use. It is worthy of note that the process of tax sale wipes out all subsequent liens and interests, such as mortgage liens, and thus clears up deficiencies in title that arise from the existence of these interests. However, at best, title to land that has been through tax sale is open to considerable question. It should be noted that unpaid taxes often include special assessments and that in many areas the burden of these charges for street, sewer, or water improvements is considerable.

From 1930 to 1935, following the collapse of the land boom of the twenties, of the building boom, and, in fact, of the nation's economy, there was virtually no subdividing. The slowly expanding building

activity of the next few years fed upon the surplus of available sites. Lots were often offered at prices that were less than the costs of the improvements to the land. By the end of the decade, subdividing activity was experiencing a mild revival, a fact which suggests that the effective stock of building sites left over from past subdividing debauches was not so excessive as the original number of vacant lots might have suggested. It is apparent that new platting would not have been profitable in the face of a surplus of high-quality property suited to market requirements, for such a surplus would keep prices below the cost of developing a new area. But, as heretofore explained, the quality of available lots was often low, and a large proportion of them was unsalable. Furthermore, many of the subdivisions were not being actively promoted. Thus, a well-designed, well-merchandised subdivision would occupy a strong competitive position in comparison with an area indifferently planned, weakly promoted, and marred by scattered houses of a previous era, even though that area be closer in and better served with utilities and conveniences. Furthermore, much of the new subdivision of raw land has been by development companies, which carry the production process through all its stages from the purchase of acreage to the construction and sale of houses. By using attractive model houses as bait and by well-calculated sales tactics, these organizations often succeed in their locational competition with areas that possess greater site advantages.

The steady though moderate rise in land prices during the immediate prewar years and since suggests that the stock of desirable building sites is diminishing in relation to the rapidly increasing demand. The great increase in new subdividing activity since the war indicates that prices have reached a point where the costs of raw land and the necessary development expenses can be more than met. In some parts of the country, extensive land platting got under way within a few months of the end of the war. In general, the postwar land subdivision (to 1947) has been in anticipation of use as the building boom develops. Speculation in lots has not been widespread. The quality of new subdividing is much higher than in the twenties, because of more widespread subdivision controls, the influence of FHA, the increasing appreciation among lending institutions and builders of the advantages of sound practices, and the greater appreciation of these factors by the ultimate user, the householder.

There is today present the potential for a speculative land market, which may be set off by the great pressures of need for housing such as today exist in almost every community. But there are present a number of inhibiting forces that were not present at the time of past land speculations. One factor is the increasing proportion of new construction at relatively low value levels. This type of housing calls for land at the

lowest possible price and does not allow for a wide profit margin. Speculation feeds on the promise of profits far greater than could be expected in connection with lots for working-class houses.

The fact that an increasing share of new house building is being done by developers who prepare their own land decreases the opportunities for speculation by individuals. In many cases, a single developer will lay out, improve, build up, and sell off an entire subdivision. In addition, much of the building is done by operative builders who buy up blocks of lots for immediate use and who will not pay speculative prices.

There are other inhibiting forces present in the market today that were not present 20 years ago, for example, a memory of past losses in subdivision lots, the ill repute of the land contract, the greater diffusion of development throughout the penumbra of cities, the hesitation of municipalities to extend utilities and services without payment of costs in advance, and the spread of legal controls over subdividing. But perhaps the most potent factor of all is the improved lending practices of financial institutions. There is now much less likelihood of recognizing speculative land values in appraisals for lending purposes and a much stronger demand for sound subdividing practice. The FHA has led the way to these higher standards and stands in a strategic position to enforce them through the medium of the mortgage risk rating system. There is a growing recognition among developers and consumers, as well as mortgage lenders, of the advantages of sound land planning and a greater appreciation of the forces that create and support land values. For this reason there will be less gullibility in the future in accepting uncontrolled subdividing as sound.

It may be said that the present tendency in land development is the preparation and marketing of lots for use rather than for speculation. This happy situation may not persist, but at the present, lot sales in both old and new subdivisions are mainly to individuals who are planning to use them as home sites or to operative builders who plan to erect houses for sale.

Rental Market

The residential rental market and the sales market are closely related. They are generally subject to the same underlying forces of demand, for the demand for housing of all kinds fluctuates with the number of family groups in the housing market area and with the incomes of these families. But the sales and rental markets are each subject to special influences and each reacts in its own special way. Since newly married couples normally seek a small flat or apartment, the market for such units is directly influenced by the marriage rate. Unfavorable economic conditions, un-

employment, and reduced incomes strengthen the demand for rental units at the expense of home ownership. At certain times in the real estate cycle, rents may be for a time at a level that is relatively lower or higher than the prices of dwellings for sale and thus increase or decrease, as the case may be, the strength of rental demand. This shifting of demand between the rental and sales markets is conditioned by the various circumstances that have been mentioned, but in every case of a family making a housing choice, the option of entering either market is open. We shall see that much of the stock of rental housing also readily shifts between the markets. The result of the shiftability of both demand and supply is to keep the two submarkets in a fairly constant state of value equality. If a better "buy" can be made temporarily in the rental market, potential home buyers may find it more advantageous to rent, thus increasing the demand for rental units and tending to cause rents to stiffen; at the same time owners may be encouraged to offer single-family homes for sale instead of renting them, which tends to reduce the level of sales prices by increasing the effective supply and tends to strengthen rents by reducing supply relative to demand. Because these reactions are sluggish, either the rental or sales markets may offer the better bargains for a limited time. At times in the cycle, sales prices may remain below the level of equality because of other considerations than price, for example, a reluctance to assume the fixed obligations of home ownership at a time when future employment and incomes are uncertain. At other times, the bargains in rental units may be widely ignored for a time when prosperity and social pressures are pushing families to seek the comforts and prestige of home ownership.

Existing Stock of Rental Units. In 1940, there were 16,300,000 tenant-occupied urban and rural-nonfarm dwelling units in the United States. By 1947, the result of widespread home purchase was to reduce the number of rented units by about 1 million. (See Table 52, next page.) More than 40 per cent of all rented units were single-family structures. The next largest groups were the dwellings in apartment buildings of five or more units and units in two-family structures; each of these groups accounted for about 20 per cent of the total. About 2.3 million of these dwellings were in structures that had been converted from the original interior arrangement and intent. In general, rented dwellings are in structures of greater age than are owner-occupied homes. Nearly one-half of the structures were built before 1910. (See Table 53, next page.) More than half of the rented dwellings contained two, three, or four rooms. (See Table 54, page 315.) The state of repair and plumbing equipment of rented units were found to be at a lower level than for

TABLE 52. NONFARM TENANT-OCCUPIED DWELLING UNITS BY TYPE OF STRUCTURE, 1940

Type of structure	Number	Per cent
All tenant-occupied units. .	16,334,937	100.0
1 family detached...	6,203,418	38.0
1 family attached (row house) . .	560,463	3.4
2 family side by side	1,182,899	7.3
2 family—other	2,346,686	14.4
3 family...	1,094,809	6.7
4 family.....	741,461	4.5
1-4 family with business.	632,549	3.9
5-9 family	1,307,044	8.0
10-19 family	753,277	4.6
20 family or more	1,425,446	8.7
Other dwelling place	86,885	0.5

TABLE 53. NONFARM TENANT-OCCUPIED DWELLING UNITS BY YEAR BUILT, 1940

Year built	Number	Per cent
All units...	14,690,795 *	100.0
1935-1940....	821,926	5.6
1930-1934.....	787,650	5.4
1925-1929....	2,036,893	13.9
1920-1924....	1,701,590	11.6
1910-1919..	2,770,321	18.8
1900-1909	2,902,329	19.7
1890-1899.	1,719,233	11.7
1880-1889	920,384	6.3
1860-1879.....	671,647	4.6
1859 or earlier.. . . .	358,822	2.4

* This figure is the number of dwelling units reporting the year built, out of a total of 16,334,937 dwelling units.

owned homes. About 2.5 million units were without running water and nearly this number were in structures that were in need of major repairs. (See Table 55.) One-half of all rented units were not heated from a central heating plant but were supplied with stoves or other space heaters. (See Table 56.)

TABLE 54. NONFARM TENANT-OCCUPIED DWELLING UNITS BY NUMBER OF ROOMS, 1940

Number of rooms	Number	Per cent
All units.....	16,123,633 *	100.0
1	823,270	5.1
2.	1,927,305	12.0
3	3,168,425	19.6
4	3,490,732	21.6
5.	3,149,651	19.5
6	2,201,535	13.7
7	719,317	4.5
8.	366,314	2.3
9... . . .	126,719	0.8
10	71,467	0.4
11 or more..	78,898	0.5

* This figure is the number of dwelling units reporting number of rooms, out of a total of 16,334,937 dwelling units.

Occupancy in rented dwellings is summarized in Table 57. The median number of persons per household was 3.12 as compared to 3.26 for owner-occupied dwellings. One and two-person households account for one-third of all cases. Nearly 10 per cent of all tenants live under densities of 1.5 or more persons per room.

The distribution of units by contract monthly rent is shown in Table 58. Nearly two-thirds of the units rented for less than \$30 per month; about one-sixth rent for less than \$10. Approximately 12 per cent of the dwellings are rented with furniture. The distribution in Table 59 shows the gross rent, which includes the contract rent plus the reported average monthly cost of water, electricity, gas, and fuel paid for by the tenant; the rental value of furniture is not included. The resulting rental figure provides a better basis of comparison than the contract rent, which in individual cases may include various combinations of utilities and services.

The large proportion, over 40 per cent, of rental units that are single-family structures is worthy of comment, particularly in light of the fact that it is rare that a dwelling of this type is originally built as a rental investment. It may be safely assumed that almost all such structures were built by owners for their own use or by operative builders for sale for owner occupancy. The rapidity of the shift from actual or

TABLE 55. NONFARM TENANT-OCCUPIED DWELLING UNITS BY STATE OF REPAIR AND PLUMBING, 1940

Plumbing	Total		Not needing major repairs		Needing major repairs	
	Number	Per cent	Number	Per cent	Number	Per cent
All units.....	15,164,085 *	100.0	12,777,145	84.3	2,386,940	15.7
With private bath and private flush toilet.....	9,554,693	63.0	8,827,501	58.2	727,192	4.8
With private flush toilet, no private bath.....	978,701	6.4	746,650	4.9	232,051	1.5
With running water, no private flush toilet.....	2,124,188	14.0	1,647,696	10.9	476,492	3.1
No running water in dwelling unit.....	2,506,503	16.6	1,555,298	10.3	951,205	6.3

* This figure is the number of dwelling units reporting on state of repair and plumbing, out of a total of 16,334,937 dwelling units.

TABLE 56. NONFARM TENANT-OCCUPIED DWELLING UNITS BY HEATING EQUIPMENT, 1940

Heating equipment	Number	Per cent
All units.....	15,966,032 *	100.0
With central heating.....	7,413,937	46.4
Steam or hot-water system	4,719,913	29.6
Piped warm-air system	2,290,728	14.3
Pipeless warm-air furnace	403,296	2.5
Without central heating	8,552,095	53.6
Heating stove	7,094,142	44.5
Other or none	1,457,953	9.1

* This figure is the number of dwelling units reporting on heating equipment, out of a total of 16,334,937 dwelling units.

TABLE 57. NONFARM TENANT-OCCUPIED DWELLING UNITS BY NUMBER OF PERSONS IN HOUSEHOLD, 1940

Number of persons in household	Number	Per cent
All units.....	16,334,937	100.0
1.....	1,478,221	9.0
2... ..	4,358,067	26.7
3... ..	3,787,608	23.2
4.. ..	2,902,140	17.8
5... ..	1,713,418	10.5
6... ..	953,355	5.8
7. . . .	518,151	3.2
8 or more..	623,977	3.8
Median number of persons..	3.12	

TABLE 58. NONFARM TENANT-OCCUPIED DWELLING UNITS BY CONTRACT MONTHLY RENT, 1940

Contract monthly rent	Number	Per cent
All units.....	16,177,770 *	100.0
Under \$5... ..	885,741	5.5
\$5-9.....	1,936,661	12.0
10-14... ..	2,279,797	14.1
15-19....	2,217,466	13.7
20-24....	2,013,190	12.5
25-29... ..	1,839,540	11.4
30-39... ..	2,526,102	15.6
40-49....	1,300,080	8.0
50-59... ..	570,410	3.5
60-74... ..	326,662	2.0
75-99 . . .	164,301	1.0
\$100 and over...	117,820	0.7

* This figure is the number of dwelling units reporting on contract monthly rent, out of a total of 16,334,937 dwelling units.

TABLE 59. NONFARM TENANT-OCCUPIED DWELLING UNITS BY GROSS RENT, 1940

Gross rent	Number	Per cent
All units.....	15,143,552 *	100.0
Under \$3.....	48,938	0.3
\$3-4.....	185,386	1.2
5-6....	381,638	2.5
7-9.....	787,553	5.2
10-14 ..	1,613,926	10.7
15-19....	1,735,129	11.5
20-24 ..	1,838,139	12.1
25-29... ..	1,767,632	11.7
30-39....	3,028,717	20.0
40-49.....	1,967,184	13.0
50-59. ...	924,619	6.1
60-74	513,475	3.4
75-99... ..	227,747	15.0
100-149. ...	85,832	0.6
150-199.....	20,764	0.1
\$200 or more..	16,873	0.1

* This figure is the number of dwelling units reporting on gross rent, out of a total of 16,334,937 dwelling units.

intended owner occupancy to tenant occupancy is illustrated by the census reports, which show that in 1940 there were 3,360,000 single-family structures reported as having been built between 1929 and 1940, most of them, of course, in the latter half of the decade. By 1940, 970,000 of this number, or about 29 per cent were tenant occupied. The conversion from owner to tenant occupancy is the product of a number of forces, some of which are simply the concomitants of the passage of time. It has been estimated that an average of some 330,000 owner-occupant families per year were dissolved by death or divorce between 1930 and 1940. The change in occupancy that sooner or later follows all family dissolution does not necessarily mean a shift of the unit from owner occupancy to tenant occupancy. However, the chances favor such a shift, as explained in the discussion of housing demand in Chap. 4.¹³

The shift of single-family homes into tenant occupancy is accelerated in times of economic stress and unemployment, as in the early thirties, when depressed family incomes lead to increased foreclosures and when the possibilities of reselling the properties into home ownership are re-

¹³ Chapter 4, p. 102.

duced. At other times, prosperity or a housing shortage may check or even reverse the movement as in the early postwar years.

Marketing Rental Dwellings. The machinery of the rental market is to a considerable extent that which has been described as characteristic of the urban land market in general. However, broker participation is somewhat less in the rental market in relation to the aggregate of rental transactions. All real estate brokers do some rental business and in many cases operate property management departments that not only do renting on a brokerage basis but also have full operating responsibility for the rental properties of clients on a contractual basis. The broker-manager acts for the owner in all relationships with tenants and in the upkeep of the property. A fee of 4 to 5 per cent of the gross rent return is common and in some cases the manager receives an additional fee for each new tenant. Large apartment buildings are often operated by a resident manager, a salaried employee of the owner who is responsible both for the renting of apartments and for maintenance. In many cases, the janitor performs these functions. For the small owner who has a single-family unit to rent or a flat building to manage, the classified-advertisement section of the newspaper is the major marketing device. He may also list his vacancies with one or more brokers, usually agreeing to pay one-half of the first month's rent in case the broker produces a satisfactory tenant. Vacancy signs are often posted on the property.

Prospective tenants do their shopping in the classified-advertisement section of the papers, where owners, brokers, and property managers are accustomed to list their offerings. The customer may also shop in person or by telephone among the brokers and property managers and may cover the area in which he is interested in search of vacancy signs.

Rental Housing Origins. We have learned that more than 40 per cent of all rented dwellings are single-family structures, most of which were not intended for tenant occupancy when built. Between 1920 and 1930, single-family homes accounted for varying proportions of new housing construction ranging from 80 to less than 60 per cent. Between 1930 and 1940, the percentage ranged between 80 and 90.¹⁴ During that decade the number of tenant-occupied units increased by some 4 million. Table 60 represents an attempt to account for this increase. Note that only 546,000 or 13 per cent of this total was in the form of units in new multi-family structures.

A qualitative analysis of new rental units added to the stock of housing in recent years reveals that they are generally intended for occupancy

¹⁴ Colean, Miles L., *American Housing* (New York: The Twentieth Century Fund, Inc., 1944), p. 66.

TABLE 60. SOURCES OF INCREASE IN OCCUPIED RENTED DWELLING UNITS BETWEEN 1930 AND 1940 *

Units in new multifamily structures.	546,000
New single-family units built for or shifted to tenant occupancy.	967,400
Tenant units added through conversion.	725,000
Additional tenant units provided in unremodeled housekeeping quarters.	345,000
Units which were vacant in 1930 but occupied by tenant households in 1940.	722,300
Balance to be accounted for by a shift from owner to tenant occupancy as a result of voluntary abandonment, foreclosure, and family dissolution.	897,037
Total.	4,202,737

* Ratcliff, Richard U., "Notes on the Recent Decline in Home Ownership," *Journal of Land and Public Utility Economics*, November, 1944.

by the upper-income groups, well above the bulk of tenant families. The result is that most tenant families occupy old structures, which, in a substantial proportion of cases, provide less than a decent minimum of housing facilities. This fact suggests the desirability of building more new rental housing to rent at modest levels. There are a number of explanations for the relatively small volume of new rental housing of all qualities. As explained earlier, a supply of rental units is constantly fed into the market in the form of single-family structures that, for various reasons, are being converted from owner occupancy. Thus, new building of single dwellings does make a substantial, though delayed, contribution to the supply of rental units. Another observation is that the production of rental housing in the past appears to have been strongly influenced by opportunities for large entrepreneurial profits to a far greater extent than by the opportunities for making sound, long-term investments. Thus the large volume of new apartment-house projects in the late twenties was accounted for to a considerable extent by the opportunities for generous profits in the sale of real estate mortgage bonds. Projects were promoted with little regard to basic market needs or sound finance. At a later period, there was a spurt in apartment-house construction following the establishment of the FHA and the adaptation of mortgage insurance to rental housing financing. That this initial interest in limited-dividend rental housing was a result of opportunities for extraordinary profits is suggested by the fact that interest dropped sharply when an amendment to the National Housing Act restricted the watering of the capital structure of proposed projects with

promoters' stock, stock payments of architects' and contractors' fees, and the overvaluing of land.

The lack of new low-rent housing is basically the result of the inherently costly nature of housing. It is not economically feasible to build and operate new rental properties under a rent scale that is within the reach of low-income families.

Market for Homes

The major factors of demand and supply in the owned-home market have been discussed at various earlier points. It would appear that the demand for homes is subject to wider fluctuations than is the supply, since the large number of single-family structures that are rented at all times provides an effectively inexhaustible supply of potential owned homes. That this stock of used housing is a major market factor is illustrated by data for one metropolitan area, which show that, for the period 1917 to 1938, the sale of new houses accounted for only 20 per cent of all transactions in single-family structures. Even at the peak of the building boom, new house sales never rose above 30 per cent.¹⁵

The stock of owned homes in 1940 was distributed according to the value of the property as indicated in Table 61. The median value was \$2,938. It is notable that only 23 per cent of the values were \$5,000 or more.

A comparison of the value distribution of owned homes and rented dwellings is possible through the medium of the rental value figure. Table 62 compares the data and suggests that in general rented dwellings are of lower grade than owned homes.

Value Stratification and Filtering

It is a well-recognized phenomenon that housing tends to move downward in the quality and value scales as it ages. Thus housing that is introduced at or near the top descends gradually through successively lower value strata. It is often contended that the needs for additional housing on the part of the lower income groups can be met by the production of an adequate supply of new housing for the upper income groups. Thus, used homes would be released to be passed down to successively lower levels until the effect reached the bottom of the market. This process is popularly referred to as "filtering down" and is described most simply as the changing of occupancy as the housing that is occupied

¹⁵ Hoad, William M., *Real Estate Prices: A Study of Residential Real Estate Transfers in Lucas County, Ohio* (unpublished doctoral dissertation, University of Michigan, 1942).

TABLE 61. NONFARM OWNER-OCCUPIED DWELLING UNITS BY VALUE OF OWNED HOMES, 1940

Value of home	Number	Per cent
All units	11,021,712 *	100.0
Under \$300. . . .	465,281	4.2
\$300-499	348,810	3.2
500-699	469,120	4.3
700-999.	486,468	4.4
1,000-1,499. . . .	982,752	8.9
1,500-1,999. . . .	951,194	8.6
2,000-2,499 . . .	1,017,488	9.2
2,500-2,999 . . .	902,550	8.2
3,000-3,999. . . .	1,708,775	15.5
4,000-4,999. . . .	1,143,077	10.4
5,000-5,999 . . .	859,463	7.8
6,000-7,499 . . .	742,080	6.7
7,500-9,999 . . .	449,060	4.1
10,000-14,999. . .	302,194	2.7
15,000-19,999. .	99,147	0.9
\$20,000 or more	94,253	0.9

* This figure is the number of dwelling units reporting on value of owned homes, out of a total of 11,413,036 dwelling units.

by one income group becomes available to the next lower income group as a result of decline in market price, i.e., in sales price or rent value.¹⁶ A consideration of this line of reasoning will provide the occasion for examining the important characteristics of the filtering process.

In its application to the problem of substandard housing, the argument is that filtering down is the normal process for providing housing for the poor and that to eliminate from use those dwellings which are substandard we need only to build enough new units to be introduced into the supply at the usual levels. Thus the solution for substandard housing conditions is a rate of housing production that will release a sufficient number of used dwellings to successively lower income groups so that the substandard housing may be retired and the families at the bottom of the income scale may have the opportunity to live in housing of accept-

¹⁶ The term "filtering up" is sometimes used to designate this phenomenon. Over the long run neither the houses nor the families move upward on a quality or value scale. On the other hand, there may be temporary market situations of surplus, which result in drastic declines in market price and which enable some families to enjoy for a time a higher quality of housing at no increase in outlay.

TABLE 62. NONFARM OWNER-OCCUPIED DWELLING UNITS BY ESTIMATED MONTHLY RENTAL VALUE AS COMPARED WITH NONFARM TENANT-OCCUPIED DWELLING UNITS BY CONTRACT MONTHLY RENT, 1940

Monthly rent	Per cent of owner-occupied units	Per cent of tenant-occupied units
All occupied units.	100.0	100.0
Under \$5	5.6	5.5
\$5-9	8.3	12.0
10-14	9.5	14.1
15-19	9.7	13.7
20-24	10.5	12.5
25-29	11.0	11.4
30-39	17.2	15.6
40-49	11.0	8.0
50-59	6.6	3.5
60-74	4.8	2.0
75-99...	2.9	1.0
\$100 and over... . .	2.9	0.7

able quality at no higher rents than they formerly paid for substandard accommodations. This argument is persuasive, for it is commonly observable that much housing is occupied by successively lower income groups over the years and that substandard housing conditions frequently occur in structures that have seen better days. But we must seek an answer to the failure of this filtering process, up to the present, to eliminate antisocial housing conditions. We must have a basic understanding of the circumstances within the housing market under which filtering is encouraged or is inhibited.

Surplus as a Requisite. A condition precedent to filtering down is some excess of housing supply over demand at the level from which the filtering is to originate. The surplus of housing may arise either from an increase in supply or a decrease in demand. New production or conversion can increase the supply; decline in effective demand may result from the following situations: (1) family dissolution; (2) families moving out of the income-demand group because of change in income, change in family composition, or emigration from the market area. Each of these situations has its opposite. Families are constantly being created by marriage and additional families are entering the income-demand group for the same reasons that lead them to move out of the group. It is apparent,

therefore, that the forces of decline in demand must exceed the forces of increase in demand if a net surplus of housing is to result from a change in demand. On the supply side, a surplus may be created when the number of new units produced by new construction or conversion exceeds the number of units lost through demolition. Changes in effective supply also may be brought about by the release of units from the next higher price level and the loss of units to the next lower level. Whatever may be the combination of these influences on demand and supply in a given stratum of the housing market, no filtering down from that level can occur unless the net product of the forces is an excess on the supply side. Furthermore, it is essential to the process that at each successively lower level there must be a surplus if the effect is finally to reach the bottom of the market and provide alternative accommodations for the families that have been living in squalor. If, as the original surplus is passed down the line, it is dissipated and absorbed before it reaches the lowest stratum, no substandard housing will be replaced.

For the purposes of this analysis of filtering, the general level of family incomes will be assumed to remain constant.¹⁷ It is apparent that, if all family incomes at all levels should move together either up or down, each income group would tend to maintain the same relative position in the housing hierarchy. However, if the income of certain groups should be changed, an exchange of dwellings might occur in order to re-establish the normal relationship between income levels and levels of housing quality. Even though the income changes included an increase in the incomes of those families occupying the worst housing, these readjustments would not result in emptying the substandard units unless new construction were to take place; there would be simply an exchange of occupant families.

It is requisite to the process of filtering not only that there shall be unoccupied housing units available, but that they shall be available at a favorable price, a price lower than that which they have been commanding. The surplus of housing must be sufficient not only to provide units for filtering purposes, but also to weaken the price. A majority of the families in the housing market are trying constantly to better the existing relationship between their incomes and the quality of their housing accommodations. Filtering does not begin until one or more householders at a lower income level discover that the used housing that is released represents an advantageous alternative to the housing that they are presently occupying. They find it to be of better quality or more suited to their present needs in physical characteristics or location and available at a price that they are willing and able to pay. Likewise, newly

¹⁷ It is also assumed that rent-income ratios remain constant.

built housing is filled by families that find it to be an advantageous alternative to their present housing.

Change in Quality. It is usually assumed that the occupancy of housing by successively lower income groups is concomitant with a deterioration in the quality of the accommodations. This relationship obtains in a general way, but filtering could take place without any significant change in quality; and the rate of filtering is not proportionate to the rate of deterioration. Decline in quality resulting from physical change, obsolescence, and a degeneration of the environment is only one of several factors that condition filtering.

Quality decline is significant only when the housing is put at a relative disadvantage in the market and a downward adjustment in price results. During the present shortage in overcrowded communities, the pressure of demand is so great that prices have been moving up instead of down, although the quality of the housing is generally declining with the passage of time and because of the difficulties of effecting proper maintenance. During the depression of the thirties, on the other hand, filtering was relatively rapid because of large vacancies in certain segments of the market, which resulted in rapid downward adjustments in price. In any one segment of the market, quality decline is not translated into price decline unless some of the occupant families find other new or used housing with a better quality-price relationship and at a price or rent that they can afford. The resulting excess of supply created by the units that they have vacated brings about a price reduction.

We may conclude with respect to physical deterioration, obsolescence, and neighborhood decline that these factors are not, of themselves, the causes of the filtering down of housing. Quality is a relative matter, so that these forces lie dormant until some better housing value appears; then the old and obsolescent dwellings are abandoned, become a drag on the market, and are offered finally at a lower price to the next lower income group as better values than the still older and more obsolescent dwellings in which these families have been living.

Need for New Construction. It should now be clear that, in a static or slowly growing community, filtering will not occur unless there is a sufficient amount of new construction to create a surplus of supply at some level. The deterioration of housing quality alone will have no effect except to bring about a gradual lowering of housing standards in all strata of the market. In communities that are suffering a continuing decline in the quantity of demand due to the degeneration of the economic base, a surplus of housing may be created as demand declines and a general improvement of housing accommodations at all income levels might result from the filtering process. But in healthy areas some new con-

struction is required to start the filtering process. Furthermore, it appears to be fundamental that no more units will be released for filtering down from any given market level than constitute the surplus created by this new construction.

Surplus as a Check on Production. It is a well-established principle that in a normal market an excess of supply over demand serves as a check on new production. If at any given level in the housing market new construction of dwellings proceeds at a rate faster than the increase in demand, vacancies will rise to a point where the rents and prices of existing units will react. As these prices fall in response to continued production, prospective purchasers of new homes will have a wider choice of existing housing at prices that will become more and more favorable in comparison with new housing. It will become increasingly difficult to sell new housing in competition with existing units that have been reduced in price, and construction will be retarded and ultimately stopped. New construction will not revive until the surplus is absorbed and the price level for housing at this level has stiffened. Thus, the number of units that can be released for filtering at any given level of the market is limited by the effect that the filterable surplus will have on building activity. If the new building takes place in the higher price levels where the total housing stock is relatively small, the number of units that can be added before the inhibiting effect is felt also will be small. If the new housing is added in the middle and lower middle ranges, in which the largest proportions of the total housing stock is found, the increment may be substantially greater in number and the ultimate effect at the bottom of the market, at the end of the filtering process, will be correspondingly larger. For example, based on the 1940 situation in Milwaukee, a 10 per cent increase in the number of units in the \$20 to \$30 range amounts to more than 5,000 units, whereas a 10 per cent increase in the \$50 to \$60 range is about 1,500 units.

In the long run, a surplus of units that accumulates at the bottom of the market probably will have an inhibiting effect on new construction, no matter at what level the building is taking place. The deflationary effect of an excess of supply can move upward through the market strata even as it may move downward. Theoretically, owners will remove their properties from the market by demolishing the structures when rent falls below the level of taxes and maintenance. Actually, there is a considerable reluctance to demolish housing structures and relatively few have been physically removed from the market.¹⁸ Upkeep is neg-

¹⁸ It has been estimated that the number of dwelling units demolished during the decade ending in 1940 was about 40,000 per year. See *Housing and the Increase in*

lected, taxes are allowed to become delinquent, and the properties are milked by their owners as long as possible. Owners hold on in hope of better times to come. In any event, it is clear that, if the filtering effect is to operate, it is necessary to eliminate at the bottom substantially the same number of units that are added to the market at some higher level, whether this removal results from natural economic forces or whether it be by compulsion.¹⁹ This principle suggests that, in order to secure the greatest possible advantage from the filtering process toward the elimination of substandard housing, a program of enforcement of housing regulations should be instituted to ensure the removal of the worst housing units as fast as additional units filter down to the lowest level.

Surplus at the Bottom. We should distinguish between substandard housing and the lowest stratum in the housing market. At the present time, in most of our communities the lowest level is composed almost entirely of substandard housing, and, in fact, some of the units in higher levels are in violation of housing codes. The elimination of all substandard housing from the market will mean that the lowest rent level, which in terms of rent paid will be no higher than before, will contain only housing that is socially acceptable and not in violation of law. In order to permit the retirement of the substandard units that are now occupied, enough units must filter down to the bottom so that not only may the substandard units be condemned and retired but also there will be a sufficient surplus of acceptable housing to bring its rent down to the level of rents that were paid for the displaced housing. We do not yet know enough about the economics of slum housing to be sure whether the low rents for substandard housing are made possible by the illegal use of the structures, the overcrowding, the neglect of minimum upkeep, and the failure to install minimum equipment. To the extent that such is the case, it may not be possible to provide acceptable used housing at rents as low as slum dwellers have been paying. The floor of rents will be the sum of taxes and upkeep plus the amortization of repairs or equipment that may be necessary to make the dwelling legally habitable. If the owner cannot obtain a rental return from the former slum dwellers sufficient to meet fixed charges, he will be better off to close or demolish the structure.

Accelerated Depreciation. If substandard housing is to be removed as a social menace through the filtering process within a reasonable length

Population, Serial no. R-1421, U.S. Department of Labor, Bureau of Labor Statistics (U.S. Government Printing Office, 1942), p. 12, Table 2.

¹⁹ This statement assumes that the housing needs at the bottom of the market have been met.

of time, a high price will have to be paid in terms of a loss in value of the existing housing stock. It has been pointed out that housing units filter down only when they decline in market price so that successively lower income groups can afford to occupy them. The faster the value decline, the faster the filtering. It will be recalled that our cities now have a substantial complement of substandard housing. Unless these conditions are to be allowed to remain indefinitely, it will be necessary to retire these dwellings and to replace them with dwellings at the minimum standard, available at no higher rents. Thus all the housing which then constitutes the lowest stratum and which is just above the level of tolerance will stabilize at lower rents, and thus lower values, than before. The deflation at this level will infect the next higher level, and so on up the line, until the entire stock of housing has suffered a downward readjustment in value. Once having retired all the existing substandard housing, the rate of value decline need only be sufficient to permit the removal of dwellings just as fast as they deteriorate into the substandard category. But to rid our cities of existing slums, the rate of filtering, and thus the rate of value loss, must be greatly speeded up so that the backlog of substandard units may be absorbed.

Time Dimension in Filtering. The significant time dimension in the filtering process is the period from the introduction of the new housing into the market until the effect is felt at the bottom of the market in terms of acceptable housing units made available to families presently living in slums. The original impulse is transmitted down through the market in a series of transactions. The real estate market is notoriously imperfect; the dwelling space that is traded in the market is not standardized and easy to compare and it cannot be transported nor sold from samples; the buyers and sellers are not well informed and bids and offers are often made on the basis of noneconomic impulses and without knowledge of other transactions or other bids and offers. These market imperfections lead to a sluggishness in market adjustments both in terms of the time required to effect the adjustments and the degree of the adjustment. The market is often insensitive to mild impulses; on the other hand, a strong impulse often leads to overcompensation. Delays in market reactions are brought about also by the existing tenure arrangements. Where a rental unit is under a year lease, neither the tenant nor the landlord is free to make changes in occupancy or rental until the lease expires. Home owners are free to act at will but are prone to delay action or to decide against it even when the financial advantage is obvious. Sentimental attachments to the home and social ties in the neighborhood are strong inhibitors. Furthermore, the accounting concepts of the majority of home owners are usually unorthodox and un-

enlightened so that they are not always aware of the actual relative costs of occupying alternative accommodations. Finally, when capital is required to effect a change in housing, the home owner usually must sell his present dwelling in order to provide the down payment for a different one.

It seems reasonable to conclude that the stronger the impulse—i.e., the greater the surplus—the higher will be the rate of filtering. The fewer the obstacles of tenure, the faster will be the market reaction; thus filtering will be more rapid in the rental market than in the sales market. We may assume also that the larger the market, the more sluggish will be its response or, to be more exact, the longer it will take to effect a full readjustment throughout the segments of the market. Thus it is probable that the downward movement of dwellings through the upper ranges of the market may be more rapid than at lower levels. Perhaps the most important determinant of the time dimension in filtering is the number of transactions involved in the transmission of the impulse from the point of surplus to the lower reaches of the market. The greater the value distance, the larger is the number of transactions that will be involved. A surplus that appears among high-priced homes will be far longer delayed in its effect at the bottom than a surplus of modest working-class dwellings.

The fact is that we do not know how long it takes for a dwelling to filter down to the bottom of the market. We do know that the oldest houses in the community are often those of lowest quality, but we have no data on how long they have been at the lowest quality level. Furthermore, we find many dwellings in the substandard category and just above it that are middle-aged and, in fact, younger than much of the housing of better quality. There is adequate demonstration that the factors that induce filtering are varied and complex; that they vary among localities and among types of housing. But we do know enough about the subject to be sure that filtering is a process that takes many years to be effective; that it is no quick cure for substandard housing ills.

Market Experience with Filtering. It is assumed generally that the filtering process has been operating in our American cities down through their history and that our low-income groups have been provided with housing in this fashion. The fact is that a good deal of our present housing stock was built at or not much above the slum level. Much of the housing now in violation of local codes is illegal not because of progressive deterioration but because of original design and lack of minimum equipment. The tenement houses of the Eastern cities, the Negro housing of the South, and the suburban slums found in the outskirts of almost any community are testimony to the fact that a substantial share of the

housing of low-income groups did not filter very far, if at all. A special tabulation of data from the 1940 housing census reveals that a surprisingly large proportion of the new single-family dwellings built between 1935 and 1940 were low-value shacks.

It is often assumed, at least tacitly, by persons advocating the stimulation of the filtering effect as a remedy for substandard housing that the respectable housing that is added to the market will find its way to the bottom without substantial change in quality. The facts do not bear out this assumption. It must be remembered that the essence of filtering is value decline; that this decline is based upon a fall in the desirability of the housing space provided in relation to alternatives and is expressed in the cost of housing to the tenant. Thus, a structure that filters from the upper levels will inevitably have declined severely in quality of accommodations if not in an absolute sense, at least relatively, even though the standards may still be above the acceptable minimum. Sometimes the loss in quality results from a deterioration of the neighborhood, sometimes from a deterioration of the structure, for, as rent-producing capacity falls, upkeep is likely to be neglected. Large dwellings (single-family houses, flats, and even apartments) rarely find their way to the bottom in their original form.²⁰ Normally they are cut up into smaller units or, if not, they will be shared by more than one family. Supporting evidence for this statement is found in the chronically cramped quarters of the families of low income.

There can be no disagreement over the conclusion that, up to the present time, the filtering-down process has not provided decent housing for the low-income groups. The very fact that so many dwellings have been provided directly for the lowest income stratum suggests that the end product of filtering has not been sufficient to meet the space requirements of this group. The low quality of the housing that is occupied by these families demonstrates the fact that the filtering process has not provided fit housing.

But the question to which we should address ourselves now is whether in the future we can count upon this natural market process to force out, within a reasonable time, the substandard housing that menaces society. We should consider whether, as part of a positive housing program, a controlled stream of acceptable housing can be precipitated to the bottom of the market by a conscious manipulation of the forces that condition the filtering process.

During the period of urbanization in this country, new construction has hardly more than provided a sufficient number of dwelling units to meet

²⁰ See Colean, *op. cit.*, p. 185.

the total demand. In fact, in the long run, the normal market forces tend toward this equilibrium. In most communities all but a small proportion of all structures ever built are still standing and in use. The fact is that a reasonably well-constructed building will last almost indefinitely if properly maintained. We have been adding housing as our cities have expanded but we have retired few units from use. The total number of dwellings demolished by reason of dilapidation, lost through fire, and removed to make way for a change in land use is very small. There has been only one short period in recent times when, in a few cities, there existed a sufficient surplus of units at the bottom of the market to permit their removal without direct replacement. In Milwaukee, Chicago, and other cities, a few hundred shacks were demolished during the early thirties, but not without considerable persuasion by city officials and only when demolition crews were provided free of charge under the Works Progress Administration program. The owners were reluctant to act in spite of the fact that many of the structures were vacant or were not producing a rent return sufficient to meet taxes. The reason that the filtering process has never been effective in providing acceptable replacements for substandard units is that the conditions that are essential to filtering have never been present; there has never been enough new construction of housing to fill all needs and still leave a residue of decent housing at the bottom; almost no housing has been retired from use, regardless of its adequacy or condition.

Long-run Possibilities. In the long run, if a sufficient number of new dwellings were built not only to accommodate increases in total demand but also to offset those dwellings which with the passage of time fall below the currently accepted minimum standard, it might be possible to maintain the level of quality in the total housing stock provided that the substandard units actually were removed. This conclusion is based upon hypothesis, since the filtering process in this country and probably in all other countries has not actually operated in the manner that is often assumed. Since we have never removed units from the bottom in substantial quantity and since we continue to build units that are originally substandard, the number if not the proportion of substandard units in our housing stock has been increasing steadily. But even if we could count on the filtering process to maintain our housing stock at an acceptable level of quality, we must start out with a housing inventory that does not contain antisocial housing. At the present we are far from that happy state. The most basic housing question of the day is whether the filtering process can be an effective part of a program to reduce the existing housing blight so that in future years the normal market forces in collaboration with socially enforced removal of substandard units

may operate to maintain our housing resources at the desired level of quality.

Filtering Cannot be Forced. It has been argued that a large volume of house production will solve the housing problem. By flooding the market, it is said, a sort of forced filtering will ensue that will provide the lowest income groups with a sufficiency of adequate housing. The substandard housing will be vacated and its owners ultimately will remove it from the market. This argument is often presented by its proponents with greater indirection than has been used here and with various refinements; but the central line of reasoning is the same.

The first item of significance in considering this argument is that we face the postwar era with a severe housing shortage at all levels in most urban areas. Before any beneficial filtering can take place we must build enough units to reestablish a reasonable balance between total demand and total supply. In addition, since many communities will continue to grow, we must provide additional housing for the new families. But we will need still more production. It has been demonstrated here that filtering cannot take place except in the presence of a surplus; thus new building must be sufficient to produce this surplus, and this surplus must be sufficient to be effective in softening the price level not only in the value group into which the new housing is introduced but also in the lower value groups through which the impulse must pass on its way to the bottom. It is likely that these lower value groups will contain a much larger number of units of supply than the stratum to which the new housing is added. A price adjustment will be delayed until a sufficient number of units has been passed down over a period of time to bring about a price reduction. Finally, the housing surplus that ultimately filters down to the lowest level must be sufficient to provide substitute accommodations of acceptable quality for all those families presently living in substandard units plus a surplus of decent units just above the level of tolerance that is large enough to force down the rents to a point within reach of the low-income families. These requirements add up to a very large volume of house production, though no one can presently measure it. No doubt the building industry can in time provide it, but no one expects to reach even the point of a reasonable balance of demand and supply within several years after a normal rate of house building is resumed.

A further point to be considered is the natural check on production that is created by the very surplus needed to induce rapid filtering. If this check operates, no large surpluses will be created at any point in the market, and the benefits of filtering will be even more slow in reaching the slum dwellers. We would not wish to have a run-away building boom, since the repercussions of the surplus housing that thus might be

created may be as undesirable as the slum conditions that might be ameliorated. We seek stability in residential building activity, but such stability will bring with it only a slow filtering effect synchronized with the rate of removal of substandard units. A final consideration is the value readjustment, which will accompany the removal of the existing lowest grade of housing and stabilization at a higher quality level throughout the entire market. The social benefits of such a readjustment extend well up the scale, since each income group would be able to afford a higher quality of dwelling than before. Owners and investors would suffer, however, from what would amount to an accelerated rate of value depreciation. It is significant that, if the substandard housing that is removed is directly replaced by new housing (such as public housing), which the low-income groups will occupy, the values of all housing structures at the higher levels will be sustained, since, in effect, no vacuum has been created into which they may fall.

It has been pointed out previously that the greater the value distance over which the filtering effect must pass before reaching the bottom, the longer will be the time interval. If filtering is to be counted on to be effective within a reasonable period of time, the mass of new housing must be made available at a modest price or rent. If the production of postwar houses maintains the same value distribution as that which characterized prewar building, any benefits that might accrue through filtering will be delayed many years. The facts are that there is every inducement to builders to build for the middle- and upper-income groups during the first years after the war when this market, which permits the widest profit margins, is so broad and the demand so avid.

Conclusions on Filtering. The failure of the filtering process, down through the history of American cities, to provide decent, safe, and sanitary housing for millions of citizens is strong support for the conclusions of our analysis of the phenomenon. Be not confused by the fact that many poor people live in handed-down units. The fact is that the great majority of all families in all income groups live in dwellings in which they were not the original occupants; the rate of turnover even in owner-occupied houses is surprisingly high. It is apparent that filtering is a totally inadequate remedy for the acute problem of substandard housing. Filtering cannot be forced; it is not a controllable device. The end product of filtering, at the bottom of the chain reaction, is substandard housing; thus filtering produces that very blight which we seek to remedy. Filtering cannot increase in effectiveness without the removal of housing as it sinks below minimum standards. And if by some drastic change in conditions the rate of filtering were accelerated to the point of ade-

quacy, the cost to property owners through the concomitant depreciation in the value of their properties would be tremendous.

Two other notions are worthy of record here.²¹ First, filtering is no solution to the housing problems of Negro families and other racial minorities against whom artificial barriers have been built. These families are not in the general line of filtering; they are not free to move to new locations in order to occupy the housing that has descended to a point within their financial reach. The second thought is that in our attempts to improve the original quality of housing and of its environment and to strengthen resistance to forces of depreciation through good land planning, we are, in fact, inhibiting the filtering effect, for we are moving to sustain values whereas filtering depends on value decline.

Cyclical Fluctuations

The housing market cycle, like the business cycle, takes the form of periodicity in the variations of a number of related economic phenomena as they are measured in terms of volume, velocity, balance, and price. In the housing market, the significant fluctuations occur in such transactions as sales of lots, houses, and rental income properties, rentals, mortgages made, and foreclosures; in the levels of sales prices and rent; in the volume of production of subdivision lots and dwellings; in costs of construction and costs of operation; and in the internal market balances as reflected in vacancies, overcrowding, and doubling up. These phenomena are interrelated, reacting to many of the same forces and interacting on one another. Thus changes in volume or price or balance are related and move together, though at various rates and time relationships. It is this composite of changing relationships swinging together from one extreme to the other which constitutes the housing market cycle. The sequence of events is fairly predictable, though the period of the phases of the cycle and the amplitude of the variations are not subject to dependable forecasting.

The significance of the housing market cycle lies in its impact on the general economic health of the nation, in the effect on the financial fortunes of individuals and corporations, and in its conditioning of decisions relating to housing investment. The housing market cycle, in contrast with other cyclical phenomena in our economy, is characterized by unusual length of period and extremity of amplitude. The cyclical swings influence and are influenced by other parts of the economy, for housing accounts for a substantial share of the national wealth, house building represents a significant proportion of normal productive activi-

²¹ Suggested by Gordon Howard.

ties, and consumer expenditures for shelter are as great as any other class save food. The impact of the cycle on the individual owners and investors is often severe; fortunes are made and lost, home ownership is happily embraced or tragically terminated, and investments are eagerly made and unwillingly written off. The swings in the housing market and in the market for nonresidential real estate usually move closely together; but because we have more complete, though inadequate, information on the housing cycle, it seems wise to discuss it separately in some detail.

Market Indicators. The statistical measures of housing market activities and movements are far from satisfactory. In some localities, public or private organizations assemble and sometimes publish certain pertinent series such as building permit data, construction costs, and deeds recorded. National figures on building activity, rents, construction costs, and mortgage lending activity are available. In a few cities, market research organizations collect and publish these series and others. The primary series will be discussed individually.

1. Deeds recorded. The number of deeds entered on record at the office of the Register of Deeds or corresponding public place of record is often used to measure market activity. Sheriff's deeds and other special deeds must first be deducted. Even after this adjustment, the series has many imperfections. It includes transactions covering all types of property from vacant lots to office buildings. Because the deeds do not contain a definition of the type of property, there is no practicable way of classifying the transactions without great expense. The series is normally on a county basis, which does not usually correspond to the local housing market. The transactions include many transfers that do not represent sales, such as gifts or devises. Furthermore, in areas where the land contract is in common use, particularly for lot sales or sales of older houses, the series does not fully reflect market activity, since land contracts are not usually recorded. Thus, the sales made under such contract for deed arrangements are recorded as sales in the series many years after the original transaction, when the contract has matured and a deed is issued. However, in spite of the many minor reservations that must be recognized in interpreting the deeds-recorded series, it is a useful statistical measure, particularly for comparing the levels of local market activity over not too long a period. Even a composite series representing national real estate market fluctuations shows marked cyclical characteristics in spite of the offsetting effect of local fluctuations, which vary in timing.

2. Mortgages made. There are two sources for data on mortgage lending—records of lending institutions and mortgages recorded. The

first source usually provides classified data, which distinguish between new financing and refinancing and among types of property mortgaged. However, this source does not cover mortgages made by individuals and purchase-money mortgages, which constitute about one-fifth of all mortgage investments. On the other hand, mortgage recordings are difficult to classify except at great expense; thus a series based on this source usually includes both new financing and refinancing, mortgages on all types of property, and both first mortgages and junior liens. Neither source covers financing by land contract.

3. Foreclosures. Sheriff's deeds are a dependable reflection of foreclosures, though they do not measure the full financial distress in the market. Many defaulted loans are settled by the lender taking over the property or by the borrower deeding the property to someone who will assume the obligations. Defaulted land contracts are not reflected in sheriff's deeds. Sheriff's deeds are not comparable from state to state because of the wide variation in the time interval between default and foreclosure and because of the variant effect of the cost of foreclosure proceedings and the delays involved in the use of the land contract and other expedients to avoid the necessity of foreclosure.

4. Rents. There are a few locally published rent series, but the Bureau of Labor Statistics rent index and that of the National Industrial Conference Board have been of most use. Rent data are collected on two bases—the rental of a sample of dwellings tested periodically and the change in rents on occasion of a new tenant or of a lease renewed. The latter basis provides the more sensitive measure of changing rent levels.

5. Lots recorded. The volume of subdividing activity can be easily measured by the number of separate lots provided in subdivisions placed on record.

6. Building activity. The most common source of information is the building permits granted. In many localities, the municipal building commissioner releases monthly or annual statistics on the number of permits issued, classified by type of construction, the number of new dwelling units to be provided, and the total permit value by type of construction. There are a number of limitations to this series: the area does not always correspond to the local housing market, and, in some jurisdictions within the housing market area, permits may not be required or data may not be released; the building permit is only an indication of intention and does not always result in actual construction; the granting of the permit is from three months to a year in advance of the completion of the structure and the effective addition to the supply; the permit value is usually well below the actual cost of the construction.

Another series on construction is based on contracts let and is particularly useful in the analysis of nonresidential construction. Permits are usually required for demolition of structures so that demolition activity can be measured and, in some areas, is regularly reported with the building permit figures.

7. Construction costs. The prices of the components of construction, building-material prices and wage rates, are collected locally in some cases and on a national basis by the Bureau of Labor Statistics. Series based on the composite of the component costs are usually in the form of an estimated cost for the same house at various times. In some cases, estimates take the form of cubic-foot or square-foot costs for various types of construction.

8. Vacancies. In many localities it has been customary to take annual vacancy counts, sometimes by the real estate brokers and sometimes by postmen. The vacancies are usually classified by section of the city and type of structure.

There are no very useful sources of information on changes in the levels of sales prices and property values. In some localities real estate brokers exchange sales price data, but they are not published in series form. The requirement of Federal revenue stamps on deeds, with the value of the stamps in proportion to the sales price, provides a source of fairly dependable information, though it is not often assembled and analyzed. Information on overcrowding and doubling up can be obtained only through special surveys covering all dwelling units or an adequate sample. Changes in operating costs are watched closely by property management firms, but there are few published series in this area. In some localities, annual land value maps are published by private organizations or by the tax assessor which show levels of land value for all street frontage in the jurisdiction and provide a basis for an analysis of change.

Seasonal Fluctuations. The major manifestation of seasonal movement in the housing market is found in changes in the volumes of sales and rentals and in house-building activity. The zephyrs of spring appear to serve as a market stimulant to the interests of householders in changing their abode. As the winter ends, the volume of sales of lots and homes begins to rise and continues until the beginning of hot weather. The summer market is more active than that of the winter, but less so than that of the spring. Another spurt occurs in the fall, but at a lower level than in the spring. This seasonal swing in the sales market is related to the seasonality of the rental market. The same vernal urge that prompts families to look for homes to buy or lots to build upon leads to shifts among rented dwellings. This moving

about is abetted by the May 1 lease-termination date, which is general in many communities. In the fall, the rental market is again active as families settle down for the winter. September 1 and October 1 are common lease-termination dates.

The seasonality of the building industry has been discussed in a previous chapter. In regions where the winter season is short or mild, the seasonal bulges are less marked in construction and in the volume of sales and rentals as well. There are some indications that prices and rents are influenced by seasonal factors and tend to be more firm at the seasons of greater market activity.

Cyclical Sequence. The causal relationships in the sequence of events that makes up the housing market cycle can be expressed in terms of basic economic principles. But though the sequence of the several phenomena be fixed in a fairly predictable manner, the time intervals are variant and irregular. If there is any inherent regularity in the cyclical movements, such regularity is periodically modified by the effects of influences outside the real estate market that lead to wars, internal migrations, and fluctuating economic conditions, so that forecasts of the degree of future movements are undependable. It will be well to consider the sequence of events that constitute the housing market cycle, starting our consideration at the point when the major market factors are fairly well in balance and we have "normal" conditions.²²

The first change on the upswing, and perhaps the most basic change in the entire cycle, is an increase in demand brought about by an increase in the number of families in need of housing or a rise in incomes or both. The first result of this swelling in demand is to absorb the existing vacancies as the new families find accommodations or, because of increased purchasing power, other families undouble or spread out into more comfortable dwellings. As the number of vacant units declines, the bidding for space in existing structures brings about a rise in rents and market values. The rise in rents usually leads the increase in the level of sales prices, so that, for a time, owning may be relatively more advantageous than renting. But this imbalance is adjusted as property owners find that they can get more for their properties than they thought they were worth. For rental properties, gross income rises faster than operating expenses, since rents are raised and vacancies are fewer and of shorter duration and since taxes, labor costs,

²² For an excellent discussion of the real estate cycle, see Homer Hoyt, *One Hundred Years of Land Values in Chicago* (Chicago: University of Chicago Press, 1933), Chap. 7.

and material prices do not increase much during this initial phase of the cycle. In light of the higher profits from the operation of rental properties and the higher prices for single-family homes, new construction is stimulated.

Building activity usually starts with the construction of single-family homes for sale in the middle and upper price ranges. Operative builders find the best profit possibilities in that part of the market, and among tenants who wish to inaugurate home-building projects on their own initiative there are more well-to-do families with the requisite cash resources. The fact that at the start of the postwar building boom the greatest construction activity was in small homes at the lower end of the cost scale is a demonstration of the great influence of institutional factors in the market. During the war house construction was limited to this type of dwelling to conserve materials and to provide homes within the financial reach of warworkers. FHA Title VI mortgage insurance was adjusted to these purposes. The postwar housing objective was to provide for veterans, who, in general, were young men of modest income. Thus, Title VI was converted to peacetime use for the veteran, and builders who wished to take advantage of its very real benefits were limited to the building of small homes.

As the cycle proceeds, building activity is encouraged by increasingly easy credit as the lending agencies compete to lend their growing investment funds flowing in from a prosperous people and as rising real estate prices are optimistically interpreted as leading the way to a permanently higher level of values. Building of lower priced homes is undertaken on an increasing scale as prosperity reaches the industrial workers. Rental housing in the form of large projects lags somewhat behind the building of single-family homes in part because of the longer planning period required and in part because investment funds are not generally available for apartment projects until the recovery of the market has been well established. As available vacant subdivision land is absorbed and as it becomes accepted that active building will continue for a time, a land boom develops in acreage and subdivisions.

In addition to declining vacancies, rising rents and values, and increased subdividing and building activity, the upswing of the cycle includes a general increase in the velocity of real estate transactions. The push of increased demand brings about a considerable internal shifting within the existing housing stock. For each move into a vacant unit or a newly built dwelling, there is a chain reaction that may involve several families before it subsides. In fact, the reaction is terminated only when a unit remains vacant or when a vacated dwelling is occupied by a family that has not previously occupied a dwelling in the same

community. A rising price level stimulates activity in the real estate market as well as in the market for any other kind of commodity. Some buyers enter the market for speculation, others for investment objectives, and many prospective home owners hasten to buy before prices rise any farther. The expanding needs of the community lead to activity in nonresidential real estate and construction to provide for additional commercial space and to public works to provide streets and utilities for newly developing areas. And as a concomitant of rising market activity there begin to build up two fundamental forces—increasing supply and rising costs—which ultimately bring about a reversal of trends and a downward turn.

There comes a time when the increase in demand begins to level off, and, if in the presence of such external forces as a general business recession, demand may decline. In the meantime, the momentum of the building boom is such that the peak production may well carry past the point when demand slackens off. The result is to begin to build up vacancies as new units of supply are added to the market at a faster rate than new units of demand.

During periods of active building, it is usual for the cost of construction to rise. This result is brought about by the favorable end price for the product, which permits all the participants in the building process to take an increased share without reducing the entrepreneurial profit below the incentive level.²³ The many small increases in the prices paid to suppliers and to labor can be passed on in an active market or, for a time, absorbed by the contractor or operative builder. In the end, however, a point is reached where the cost of a new house is higher, relative to quality, than the market price of comparable existing houses; in fact, as the end of the upward phase approaches, the market prices for existing houses are weakening or declining in the face of overbuilding and the creation of a substantial vacancy and the price and rent levels are falling to meet the rising level of construction costs.

The first manifestations of a turn in the cycle are an increase in vacancies and increasing difficulties in selling new houses. This change may result from overbuilding relative to demand or from a decline in demand or from both. Vacancies will be found both in rental units and in houses offered for sale, and both rents and sales prices will stop their climb and tend to soften. Operating expenses for housing, which had been rising slowly during the upward phase, narrow the margin of net income from rental properties and thus the profitability of new rental

²³ Board of Governors, Federal Reserve System, *Postwar Economic Studies*, no. 6, p. 10, June, 1946.

housing construction. Market activity declines as new demand slackens, the rate of new construction drops, and subdividing activity comes to an end. The psychology of a falling market drives out speculators and promotes caution on the part of potential participants. Lending institutions become conservative as buyers who bought beyond their means at inflated prices either voluntarily or involuntarily separate from their properties. This trend is accentuated if the downward phase of the housing cycle is accompanied by business depression, unemployment, and reduced incomes. A business depression also accentuates the downward movement by stimulating outmigration and doubling up and by leading to the deferment of marriages, all of which reduce the demand for housing and hasten the fall in rents and prices.

The end of the cycle leaves the housing market in a state of prostration, with vacancies high, rents and prices depressed, credit tight, building activity low, a low rate of transactions, and a high incidence of defaulted loans. It remains for the processes of recasting loans, disposing of burdensome property obligations, and foreclosure and sale to set the stage for recovery, which begins with a rise in the demand for housing space.

It has been observed that the period from peak to peak in the real estate market cycle is rarely less than 15 years.²⁴ This relatively long cycle is in part the reflection of the nature of the commodity, a complicated, costly durable consumers' good, which takes long to produce and very long to consume. Thus, the recovery phase of the cycle is long and the decline is relatively rapid. The long production period for housing is explained by the fact that production is not promptly sensitive to changes in demand and that a substantial oversupply may be created before building activity is halted; in the recovery movement, the oversupply may take long to absorb, and the building industry is characteristically sluggish in responding to the demand impulse. The rental market, dealing in a commodity that is more of the nature of other consumers' goods, is not so violent in its movements as the home sales market.

There can be no doubt of the powerful effect of general economic conditions on the cyclical movements of local housing markets. However, the basic sources of instability are local in nature and the most important of all is the change in the local demand for housing space relative to supply.

Recent Housing Market History. A brief summary of the fluctuations in the housing market between the two world wars will serve to

²⁴ Weimer, Arthur M., and Homer Hoyt, *Principles of Urban Real Estate* (New York: The Ronald Press Company, 1939), p. 123.

illustrate the movements of the interrelated components of the cycle and to give perspective to our present position. At the end of the First World War the market was at a low ebb of activity. Real estate transfers had reached a point that was lower than at any time during the preceding 20 years. The house-building activity was depressed as a result of wartime restrictions. Rents had begun to rise from prewar levels as a reflection of the low rate of building and the movements of population to war-production centers. Building costs were rising in keeping with intensive construction activity in the building of war facilities.

In the first two years after the war, business conditions were irregular and uncertain. Commodity prices rose rapidly to a peak in 1920 and building costs followed the same trend. The postwar housing shortage forced rents upward sharply, and in 1919 building activity rose substantially from its wartime low. The readjustment in the price structure that took place in 1921 and the business depression that extended well into 1922 were preceded by a slump in building in 1920, which was neither severe nor lasting. In 1921 residential construction bounded back to a point higher than in 1919 and by 1922 had reached a new high level. Rents continued to rise, although the rate of increase had begun to level off by 1922. Building costs dropped from their 1920 peak to a postwar low point in 1922.

The period from 1922 to 1925 was one of extreme activity. Rents continued to rise, building costs moved upward to a peak in 1924, and real estate transfers mounted to a very high level. This boom in the housing market was the concomitant of prosperous business conditions and rising prices in the stock market. The height of building activity was reached in 1925, along with the highest point in real estate transfers and mortgages made. It is notable, however, that building costs and residential rents reached their peaks in 1924 and had begun to fall off by 1925. The year 1925 was also marked by the beginning of a rise in foreclosures.

From the turning point in 1924 and 1925, the real estate market began a descent that was not to be checked until 1933. Market activity was accompanied in its decline by a falling of the rent level and reduced residential building. Building costs also fell, while foreclosures increased substantially from year to year. The stock market crash in 1929 did little more than slightly enforce the trend that was already well established in the housing market. Rents continued to drop toward their low point at the end of 1933, and foreclosures continued to rise to a peak in the early months of that same year. Building costs turned up slightly in 1933 but residential construction was showing no sign of recovery. Activity in the real estate market was at the bottom.

The recovery from this period of collapse was gradual until the effects of the war economy became apparent. Construction activity rose slowly to the prewar peak of 1941. Rents increased modestly from the depression low point and stabilized in 1938 at a point that was fairly well maintained up to the time rent controls were instituted. Foreclosures had been checked in 1932 through the ministrations of the Home Owners' Loan Corporation and, except for a spurt in 1935, fell off rapidly as market conditions improved and business prosperity returned. Building costs rose to a high point in 1937 and then declined somewhat until 1940, when the first effects of the war economy were felt.

The war period introduced many abnormal factors into the housing market. Rents were held level under Office of Price Administration controls and building costs maintained a fairly constant level in part, at least, as a result of price controls on building materials and controls on wage rates. In the fall of 1941 residential building along with all building activity was placed under a limitation order and the dwelling units produced during the war period were restricted to those necessary for the housing of warworkers in war-production areas. House building in 1942 and 1943 was substantial but dropped to a low point in 1944 and 1945. Real estate activity as measured by transfers fell sharply from Pearl Harbor to the early months of 1943. From that point, however, activity rose sharply as a reflection of the great internal migrations that were occurring and housing shortages were appearing in war-production centers. The shortage resulted in forcing families to purchase homes in order to find accommodations.

At the end of the war the housing shortage was intensified by the return of men from service, by the unusually high marriage rate, and by the disinclination of wartime immigrants to war-production centers to return to their former homes. Market activity continued to rise and building costs advanced precipitously. New construction recovered with a fair degree of rapidity in terms of projects started, but, because of the intense material shortages, building projects were not completed rapidly and the construction period was extended from a normal of 3 to 4 months to a period of 8 months to a year. By the end of 1947, house-building costs had reached a point some 80 per cent above the prewar level and the volume of construction was at a rate higher than any year since 1925.

Manifestations of Instability. The housing market is notorious for its history of wide swings in activity and in price levels. During the last 30 years, the adults of today have witnessed this instability and in many cases have suffered from it. As outlined in the preceding section, the market is just now rounding out a full cycle, which began with the extreme housing shortage following close upon the First World War. Again

we are suffering from an intense shortage, even more painful than at the beginning of the cycle some 27 years ago. The market reaction to this shortage may be the beginning of another round of excessive subdividing, overbuilding, high costs and prices—and then retribution of collapse and liquidation.

The wide swings in production activity, in sales, and in prices and rents are not the only significant manifestations of instability in the housing market. Instability is also a lack of balance among the forces in the market. Internally, the market is stable only when production is balanced with demand in both a quantitative and qualitative sense. Ideally, the market must provide a sufficient, but not an excessive, supply of housing so that each family is accommodated in accordance with its needs and its capacity to pay—in terms of size of unit, type of structure, location, tenure, and price or rent.

Not only is the housing market relatively insensitive to changes in demand, so that gross surpluses and shortages appear and persist, but the market machinery is ineffective in meeting the needs of certain groups within our population. This form of internal instability is evidenced by the extensive occupancy of substandard, antisocial housing; by the disproportionate financial burden of housing among families of modest income; by the lack of an adequate supply of housing for large families at rents and prices within reach; by surpluses on one side of town that are concurrent with shortages on the other side. The result of these maladjustments is to force many families into an unnatural housing state in which the dwelling is badly fitted to their needs, inadequate in quality, or too high in cost in relation to income.

The failure of the house-building industry to produce the kinds of housing that the market really needs has been illustrated during several phases of the real estate cycle that is just ending. During the first years of the building boom following the First World War, the industry concentrated on single-family homes for sale at a time when rental units were badly needed for the unusually large number of new families. Then, having overbuilt single-family units so that the general vacancy rate began to rise, there was a great increase in apartment construction, primarily because of the salability of the mortgage bonds used to finance the apartment buildings. Today we are seeing the beginnings of a repetition of the first postwar phase—building for sale. The reason now is the same as then, a chance for a quick turnover of capital at a good profit. Builders are manufacturers and do not ordinarily produce housing to hold as an investment. As long as the demand for new homes for owner occupancy holds up, we may expect most building to be of this character.

There are other types of instability with which the housing market is

plagued, which might be termed "external" in the sense that they reflect lack of adjustment with other segments of the economy. Thus, at times, the rate of investment in housing is disproportionate to investment in other forms of wealth, relatively either too great or too small. In addition, it is often argued that the share of family income required to provide adequate shelter is greater in terms of value received than the share spent for other goods and services. A discussion of these matters would lead into the complexities of our entire economy and cannot be adequately treated here.

CHAPTER 12

LAND INCOME AND VALUE

The forces of the urban land market, interacting within an institutional framework, are the final determinants of the uses to which urban lands are put, the nature and amount of improvements to the land, and the timing of the improvement. We have already examined the characteristics of these underlying forces of demand and supply and the mechanics of their interacting. We now turn to a discussion of the economic considerations that guide the decisions of owners and prospective investor-owners of urban properties with respect to the utilization of specific parcels. As in other realms of economic activity, the basic motivation is the maximization of return or net income. For this reason, we shall start with an analysis of the nature of land income. Our first concern is with gross income and thus with the market behavior of prices paid for the services of urban space. We shall then need to study the costs of making urban land productive of valuable services; and, finally, we shall be in a position to appraise the nature of net income, variously termed "land income," "rent," and "site rent."

Urban land has value for man as the locus of his many activities. In the case of residential property, land and its improvements provide direct consumer services; in its industrial and commercial use, land is a factor in the production of goods or services that are offered for sale. The payment for space by both the householder and the businessman is in return for direct services in contrast with the return from agricultural land, which takes the original form of the physical products of the soil. The value of the services of urban land derives in large part from the location of the land, and the value differences among plots are primarily a reflection of the differential advantages of particular sites as the locus of various activities. The differences in the value of agricultural lands lie in differences in both fertility and proximity to markets.

Urban land provides area and support for buildings and the other capital improvements that combine to make it usable; the improvements, which during their physical life become an integral part of the land,

provide shelter and facilities that are essential to its use as housing or for commercial and production purposes; the location—i.e., the space relationships with all other urban activities and with all other physical features of the landscape—invests the land with a complex quality of convenience that is the primary basis of its utility in the urban economy.

The gross payment for the services of improved urban land, where raw land and capital have been combined to produce valuable utilities, must, in the long run, cover the following shares if investment of capital in ownership and improvements is to be induced: the current expenses of operation for the property; a return on the capital invested in improvements and an amount sufficient to amortize all capital loss over the economic life of the major wasting improvements; and an additional return high enough to outbid agricultural use and all other urban uses that are competing for the site. The return on the total investment must be high enough to attract capital in competition with alternative investments in other fields. This general statement applies both to income properties and to owner-occupied properties such as homes where the direct returns are not in dollars. The significance of this distribution of the payment for the services of land will be considered later in this chapter. At this point we are to review some of the characteristics of the gross income of property owners.

Gross Income

Gross income is a function of rental rates and occupancy or, phrased differently, of price and volume of sales. The volume of sales is measured in terms of the duration of the services that are sold and paid for. It is significant that the services of urban real estate may not be consumed in advance of the day of their release; they perish with the passage of time, whether or not they are utilized, and are not recoverable. Thus the landlord cannot build up an inventory for future sale or hold for a higher price; he must sell his entire stock from day to day or the opportunity is forever lost.

It will be convenient to use the term "price" in its generic sense and to include under this term the market expressions of contract rent, sales price, and cost of ownership. These three values tend toward equivalence and move together in the market, though with unevenness. Sales price, the price that a buyer normally is willing to pay after considering alternatives, represents the present or discounted value of future rental values. The cost of ownership is a function of both contract rent and sales price; the owner must recognize a cost of occupancy that is at least as great as the rental income he might otherwise be receiving if he were to rent out his property and no smaller than the total of the interest on the

investment, taxes, maintenance, and depreciation, which total, in the long run, is in balance with the rental value.

The market price of space, over the long run, is basically an expression of its productivity or, to be more realistic, of the forecasts of men with respect to its future productivity. The current market price at times may not be in harmony with current productivity but rather may represent a discounting of future levels of productivity that are higher or lower than the present. Thus a merchant may pay a higher rent than initially will permit profitable operations in a newly developing retail subcenter because he foresees much higher levels of sales in the future. Or an investor may purchase a store building at a price higher than is justified by the current rental returns because he anticipates an appreciation in the productivity of the location and thus a rise in gross rental income. Current market price is strongly influenced by the balance of demand and supply and thus may depart from a reasonable relationship with use value because of the desperate need for shelter during a housing shortage or, at the other extreme, the urgency of sellers when vacancies are high.

Over the long run, prices tend to move about costs of reproduction, including, of course, the price that must be paid for land of the same site qualities. For example, in the residential market, prices are held in check by the option open to householders to rent, to buy, or to build a house for their own occupancy. Because of the fixity of supply and the long production period, market prices move well above or below the cost level in response to short-run situations. Also, cost and market price tend to separate for custom-built homes in the upper price ranges and for special-purpose commercial, industrial, and public buildings.

In forecasting gross income for rental housing it is customary to allow for an average vacancy of as high as 10 per cent for some types of property. Vacancy rates vary among various types of land use and among communities. Of course, actual vacancies fluctuate widely with changes in market conditions. During the depression of the thirties, vacancies in upper-class apartment houses ran up to 15 to 20 per cent in many cities; vacancies in office space reached levels of 30 to 40 per cent. The postwar space shortage has brought occupancy in all types of structures to virtually 100 per cent. Local customs, such as the use of year leases, influence the rate of tenant turnover and hence the vacancy rate, since a change in tenants often creates a vacancy during the time required to find a new occupant or during the time required to redecorate the unit. Over the long run, residential vacancies tend to be relatively low in communities that are economically stable. Turnover of tenants is at a lower rate than in less stable places and the effects of business

slumps are milder in terms of enforced doubling up and outmigration. As a rule of thumb, a 4 or 5 per cent vacancy is often said to be "normal"; at this point supply and demand are in such balance that rents and prices are not influenced by either a surplus or a shortage and are in equilibrium with costs of reproduction. Actually, the "normal" vacancy varies among communities and probably ranges from 2 to 7 per cent.

Land income, which is the conditioner of business decisions, is usually measured in terms of dollars. Of course, custom-built residential properties may return to their owners psychic satisfactions of such unique and subjective a nature as to have no established market value. And there are special-type nonresidential structures, sometimes monumental in purpose or possessing publicity value, which provide a return that is not readily assessed through the market processes of price determination. But for most properties, the market price in dollar terms is one of the two dimensions of the gross income of land, the other dimension being quantity or duration.

The two determinants of gross income—price and quantity or occupancy—tend to move together in the fluctuations of the market, with price changes lagging slightly behind. The first repercussion of increasing or decreasing demand on the relatively fixed supply of space is evidenced in the occupancy ratio. When occupancy falls off, price concessions are made in an effort to maintain gross income; when occupancy rises, prices can often be raised without adversely affecting the occupancy ratio.

At the bottom of the market swing, landlords sometimes attempt to preserve their rent schedules by giving "concessions" to tenants in the form of a month or two of free rent; thus the tenant pays an unreduced monthly rental rate but for only 11 months out of 12. There is a point below which it does not pay to operate rental properties, *i.e.*, when the gross income is less than the operating costs created by use, such as heat, light, janitor service, water, etc.

The range of fluctuations in market prices is substantial for all classes of real estate. Residential rents declined more than 30 per cent from the high levels of 1924 and 1925 to the depths in 1932 and 1933. It is not hard to find examples of sales prices of particular properties that sold in the shortage of 1946 at 250 to 300 per cent of their price in 1933. The change from 1940 to 1946 in the general price level of single-family homes was an increase of 60 to 100 per cent. Retail and office rents are also subject to wide fluctuations in response to shifts in demand.

Land Utilization Costs

Since the basis of economic decisions affecting urban land is the present and future productivity as measured by net income, we must examine the

nature of the costs that must be charged against gross revenue. Some of these costs, such as interest and depreciation, are functions of the amount and nature of the capital invested in the enterprise; other costs, such as expenditure for fuel and maintenance, are required for the productive operation of the property. Let us first examine the nature of the costs of production of urban land that are capitalized by the entrepreneur. The cost of the physical improvements, including the structure, and the ripening costs where they have been foreseen and deliberately incurred, combined with the cost or the value of the land, appear as "real estate" among the assets on the initial balance sheet of the enterprise.

Raw land has little or no value for urban purposes; it must be processed or improved in order to release its latent utility. The costs of modifying land in its natural state to prepare it as a site for a building or for other of man's activities are substantial. First comes the processing of the surface, involving clearing, grading, and draining. Then there are costs of accessibility arising from the provision of roads and sidewalks and the installation of essential utilities such as water and electric-service connections. Some of these costs, such as street installation and utility mains, are usually direct charges against the property; the costs of other public facilities that enhance the accessibility and usability of urban sites, such as major traffic arteries and sewage disposal plants, are met by general tax levies. Such costs are capitalized by the entrepreneur in the form of a reduction in land value; they appear as part of the tax burden in the form of operating costs; and the share that the property is required to bear is not usually proportionate to the benefit received.

Another set of costs arises from the necessary time interval between the beginning of the improvement process and the time when revenue is first earned. As in other manufacturing processes, interest is chargeable on capital tied up during land preparation and construction; in addition, land taxes accumulate during the same period. For large and complex structures such as hospitals or office buildings, the construction period may run up to 2 years, and the interest and tax costs are substantial. Where a new use is replacing some other urban land use, the process of supercession often involves the demolition of the existing structure and may thus create an additional cost of production.

Ripening costs are a species of waiting costs that are often encountered in real estate development. As the agricultural land that borders the city comes within the expanding orbit of urban influences, it is said to ripen into urban use and finally is ready for subdividing. Internal changes in the city structure also induce the ripening of certain sites into locations appropriate for higher uses, for example, the replacement of a residence by a commercial building or the utilization of a parking lot as

the site of an office building. Because this process of change is irregular and unpredictable and because the unit of production is large, land development is accompanied by a group of costs known as "ripening" costs. If the owner could judge the exact time when the market would absorb all the units of space to be produced, no costs of ripening need exist. If the outward expansion of urban influences and the internal structural shifts were gradual and predictable, each unit of property could be held in its original use until the appropriate and profitable time to make the shift. Each acre of agricultural land would be kept under cultivation until the time when it was needed for immediate use as building sites. In actuality, many errors in judgment are made by owners, and market analysis is extremely difficult. In committing a plot to a given use by the erection of a building, it is impossible to predict the time when a shift in the environment will justify a change in use, which, if it comes before the end of the useful life of the original structure, involves a cost created by wrecking the existing building to make way for the new. It is equally impossible to foresee whether the original use will become unprofitable in advance of the time when a different use becomes appropriate.

Another cause of ripening costs is the fact that the most economical unit of production, from a long-run viewpoint, often provides more space than can be immediately absorbed. Thus the subdivider counts on a year or more before his lots are sold and a longer time before they are in use; a large office building or apartment is counted on to take many months to attain normal occupancy. These delays create carrying costs that are in the nature of ripening costs and are legitimate costs of production. It is to be noted that ripening costs are not readily controllable; they are created by market conditions, which the investor attempts to prejudge but which he cannot manipulate. The costs are in the form of interest charges, taxes, or operating expenses and are determined by the time over which revenues are insufficient to meet such costs. No investor knowingly incurs ripening costs save of the kind that are a reflection of the economical size of the unit prepared for use. But because of the imperfections of the market, the inherent obscurity of future market shifts, and the fallibility of entrepreneurial judgment, ripening costs are a real burden on many properties.

The components of usable urban land that do not have a measurable cost of production are the space and support provided by the earth's surface—*i.e.*, the raw land that is the gift of nature—and location or situs—*i.e.*, the valuable physical fact of proximity to a complex of other urban functions and functionaries.

The extent of processing or improvement of land is so great for most

urban land uses that in the final combination of land and improvements the original raw land occupies a position of minor economic importance. For example, on a prewar basis the original price of acreage for subdividing may have run from \$500 to \$1,000 per acre, or from \$100 to \$200 per building lot. The cost of land preparation, streets, and utilities ranged from \$500 to \$750 per lot. In order to provide shelter services, this prepared land had to be combined with a house that normally cost four to six times the price of the improved lot, or, let us say, \$5,000 in this case. In this example the original raw land thus represents only 2 to 4 per cent of the final direct capital cost of the property. For other classes of land use, raw land may represent higher proportions of the final improved total cost but rarely over 5 to 10 per cent. An exception is a parking lot, which requires only grading, surfacing, electric service for lighting, and a small structure for the attendants.

In order to release the utility of the combination of land and improvements, another set of costs must be incurred to cover operations. There are outlays to cover heat, utilities, maintenance and repair, and rent collection losses. Insurance is an additional cost, which is incurred whether or not the property is occupied, and property taxes constitute a substantial burden, which must be carried regardless of occupancy.

We now come to those charges against revenues which are functions of the total investment in land and buildings. The property owner rightly expects to receive an entrepreneurial return on his total investment. In addition, the enterprise will not be sound unless his capital investment is preserved; it must be returned to him out of the proceeds of operations during his ownership, plus what he recovers through disposition. From the moment a new building is completed there is a complex set of forces that conspire to reduce its productivity. The structure itself deteriorates physically over time; it becomes gradually obsolete in design. In the case of housing properties, the neighborhood usually becomes less attractive as the structures age and the character of occupancy changes. Operating costs tend to rise as the structure becomes older, vacancies increase, and the rental rate drops. Eventually there comes a time when revenues no longer cover the costs of operation, and the economic life of the building is at an end. But the land remains and generally has some value. It is the difference between this terminal value and the original capital investment including land that represents the loss in value that must be covered out of earnings during the economic life of the building. This cost or loss, which is not actually realized until the end of the life of the improvement, is generally recognized in the accounting of the owner by an annual depreciation charge, an amount

that is estimated to be sufficient to cover the loss in value during the productive life of the property.

The balance of revenue or profit, which remains after the deduction of operating costs and depreciation, is the major consideration in business decisions with respect to property development. The general objective is to maximize this net return over the life of the improvement. Thus the nature of the improvement and the size of the investment are determined by the owner's or prospective owner's estimate of what kind of development will yield the highest residual return. The market price of vacant land is based on estimates of the maximum profit that can be produced through the most favorable of the alternative development plans.

Differential Returns and Capital-cost Combinations

When a given parcel of land is combined with various kinds and amounts of improvements and structures, different patterns of gross revenues and costs, and thus different net revenues, will result. Also, when the same kind and amount of improvements and structures are combined with parcels in different locations, various net revenues will be produced. The possible combinations of capital investment and costs that may be involved in the development of land are infinite. A wide variety of land uses are possible for each site and the investment in improvements appropriate to each land use may vary over an extreme range. Furthermore, costs of operation can be varied to some extent at the will of the owner. Each capital and cost combination will yield a different net revenue when applied to a given parcel of land. In general, the law of diminishing returns is operative, *i.e.*, a point is reached in the successive application of capital improvements and cost-creating services where the additional return received per unit of capital and labor begins to decline and finally disappears. The vanishing point is the intensive margin, where the value of the additional product just meets the costs of the added capital and labor that are necessary to produce this increment.

The variables that determine the net return that can be produced by the development of any urban site have already been mentioned; they are the location of the site, the nature of the land use, the amount of the capital investment, the operating costs, the productive life of the improvements, and the loss in value during the life of the improvements. It is the location of the site that is the key factor. The location determines the nature of the land use that is appropriate; the nature of the use largely controls the nature and amount of the improvements; the improvements, in turn, are determinants of operating expenses. The location

also influences the loss in value, since the major salvage value at the end of the life of the improvements derives from the value of the land at that time; this value is determined in large part by the nature of the locational factors. Thus the location is primary in determining, on the one hand, the level and pattern of gross income, and, on the other hand, the costs or charges against this income. It follows that the locational differences among urban sites are responsible for the differences in the patterns of development that can extract the maximum net revenue and thus the differences in the net revenue itself. In agricultural land, it is the differences in both fertility and location that account for the differentials in rent; in urban land it is location that is controlling.

Land is said to be two-dimensional with respect to its productivity. Certain sites yield a relatively higher return per dollar of cost incurred than other sites and are said to have a higher *efficiency*. The other dimension, *capacity*, refers to the amount of the costs that are required to produce the maximum return from a given site, an amount that varies in accordance with the type of land use. Thus within the central business district there may be found side by side a parking lot and a many-storied office building perhaps producing the same net return or rent. The parking-lot site has low capacity and high efficiency while the other site has high capacity and relatively low efficiency.¹

There are a number of factors other than location that condition the characteristics of urban land developments. In the first place, it is not possible to vary the costs by small gradations in many cases. Available urban land is usually found in parcels that were established by the original plat and often cannot be expanded or contracted readily or altered in proportions. Both size and shape are limiting factors in development. This principle is understood by appraisers when they recognize a value element termed "plottage," which reflects the fact that the value of two contiguous parcels when combined in one ownership may be greater than the sum of the value of the parcels in separate ownerships. Even peripheral land that has ripened for residential use must be acquired by subdividers in large tracts, which may or may not be of a size that fits the market needs. Thus part of the land may have to be withheld from subdividing and marketing for a time, incurring waiting costs that derive from the accident of ownership. Furthermore, land developers are sometimes forced to accept land that is unsuitable for platting in order to secure title to the tract of which it is a part.

Other limiting factors arise from the physical aspects of structures. For example, an office building may be built to various heights, but the

¹Ely, R. T., and G. S. Wehrwein, *Land Economics* (New York: The Macmillan Company, 1940), p. 130.

differential can be no smaller a unit than one story. Dwelling houses over a wide range of size and capacity have common equipment, which varies but little with the size of the dwelling, such as a heating plant, plumbing and sanitary equipment, utility connections, kitchen equipment, and other items. Thus the minimum investment in a dwelling normally includes those features which are common to all dwellings.

The intention of the owner with respect to the physical and useful life of the improvements may have a marked influence on the proportioning of the costs. Where the owner foresees future shifts in the retail structure, for example, he may improve vacant land with a single-story "taxpayer," which is later to be replaced by a multistory structure when the time is ripe. A structure built on a site that is expected to maintain or improve its locational characteristics over a long period may be built more substantially and thus more expensively than a building on a site that may be more subject to environmental change. Some structures are built with a view not alone to resistance to physical deterioration but also to the minimizing of costs of operation and maintenance. Long physical life becomes particularly important where the financing of the project calls for a long period of amortization.

There are differences in skill in designing structures, which will be reflected in the capital investment; and there are differences in the efficiency of management, which influence costs of operation. Costs are sometimes affected by the special desires of the owner for prestige or his unique evaluation of amenity returns; buildings are given a monumental aspect at a considerable extra cost, or an occasional owner may place his home on a precipitous building site at great expense because of the high subjective value that he places on the view.

Another limiting factor to land development, particularly as applied to large projects, is the influence that a large increment of supply will have on market price. Thus the project must not be so large as to depress the market below the level that will make the development economically sound. The physical characteristics of the site often affect construction costs by requiring special treatment of uneven terrain or unfavorable subsoil conditions. Finally, there is a wide variety of institutional factors that limit and condition the development and operation of real estate. Subdivision regulations, zoning, building codes, sanitary and safety codes, customs, and prejudices all play a part.

Value and Valuation

In the foregoing sections, we have laid the groundwork for an understanding of the basic entrepreneurial calculation that, in the practical operations of our economic system, determines the use to which land is put

and the particular combination of capital improvements and operating costs joined to exploit the site. The nature of gross income was considered, as well as the charges against gross income to cover operating expenses and to replace the capital invested in the wasting assets of the enterprise (primarily the structure); the balance represents the return on the capital investment or the profit of the enterprise. It will appear as the explanation proceeds that as a matter of arithmetical convenience the return on the assets of the enterprise is conceived to be split between that return on the wasting portion and that on the unimpaired portion. Actually, the productivity of the enterprise is an undifferentiated stream of services or revenues, which can be partitioned only in the accounting sense of applying portions of the total return for certain purposes. There is no implication that the division of the income stream is directly related to the productivity of the cost item or asset to which a portion of the revenue is applied for purposes of accounting or for determining the net worth of the enterprise.

The business calculations that determine how urban land shall be developed are no different, fundamentally, than investment analysis in other fields. The entrepreneur seeks that combination of the factors of production, in this case primarily land and buildings, which will yield the most favorable return. This calculation is often erroneously referred to as land valuation; actually it is just as truly building valuation. The value in which the entrepreneur is interested is the net worth of the enterprise based on anticipated profits. If he assumes that so many dollars must be invested in the buildings and land improvements, then the calculated net worth less this sum will represent what he would be justified in paying for the land. But if he assumes an acquisition cost for the land, then the balance of the net worth after deducting land cost will represent what he would be justified in paying for the building and improvements. His decision to proceed with the investment in the enterprise will depend upon the relationship of the hypothetical initial net worth of the proposed land development and the necessary or actual total capital cost of acquiring the land and erecting the buildings.

The traditional appraisal term, "highest and best use," simply describes that form of land development for a given site which, in comparison with alternative development schemes, will justify the highest payment for land (either as contract ground rent or purchase price) when the cost of buildings and improvements is assumed as a given amount. There is a strong tendency, in the urban land market, for each site to be developed in its highest and best use through the competition of entrepreneurs who have various plans for the use of the land in different combinations with

the other factors of production. It is through this process that the land use pattern of the city is developed.

It is impossible to separate the concept of land value from the notion of the project or enterprise. The development and utilization of urban land, while it may be carried on by an individual in preparing land for his own use, has the major attributes of a business enterprise, in which the factors of production are brought together and the utilities thus created are judged in fiscal terms. Even in the case of a landowner building his own home, fiscal considerations play a major role in his decisions; he considers the relative costs of owner occupancy and tenancy, and he looks ahead to

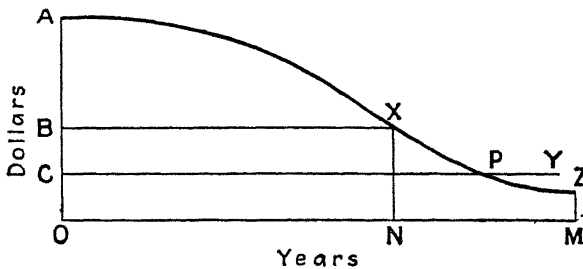


CHART 7.

the resale value of his home. For income properties such as apartment houses and office buildings, the enterprise approach is universal. The determination of the "value" of land, as the term is commonly accepted by appraisers, is a by-product of the entrepreneurial-enterprise calculation, which is demonstrated in Chart 7.

We must start with a specific parcel of land in mind, which is to be improved in accordance with a definite program of development. Line *AZ* represents the forecast of future gross revenue up to year *M*, reflecting all the possible influences on price (rent levels) and occupancy which, over the years, will bear on the productivity of the project.

CO represents the forecast of annual operating expenses—heat, light, upkeep, taxes, insurance, etc. (but not including depreciation). It might be more realistic to assume that, as the structure ages, these costs will tend to increase; but for purposes of illustration we are assuming them to be constant.

Before the enterprise can show a net return, provision must be made out of earnings to recapture and return to the investors that part of their original investment which will be wasted or lost, for whatever reason, by the time of the liquidation of the enterprise. The enterprise, in so far as it involves the original structure and purpose, is ready for liquidation

when revenues fall below those costs which are created by operation, so that there is less loss through demolishing the building and holding the land vacant, or when the nature of the location has so changed that a new enterprise, involving the replacement of the original improvements before the end of their normal life, will be able to yield a higher net return than the original enterprise.

Returning to Chart 7, we can now see that area *ACP* represents the net income of the enterprise after providing for operating expenses. Out of this net income must come the replacement of wasted assets (commonly called "depreciation") and a return for each period on unretired capital. For purposes of analysis, this net income stream can be split into return on that portion of the original investment which is not wasted, usually the land, and a replacement of the wasted value together with return on the unretired portions of the wasting asset value. In Chart 7, *BC* represents the amount of the annual return on the permanent assets of the enterprise, and the series of declining annuities represented by area *ABX* must replace the loss in value and pay a return for each period on the then unretired value of the wasting assets.

The economic life of the project is N years. If the project is continued in operation after this time, it will return a lesser amount than could be secured by replacing the improvements and starting a new enterprise; for, as will appear, the annual return *BC* is proportionate to the terminal value of the enterprise, which, in turn, is based on productivity at the end of economic life.

This chart illustrates the basic valuation formula. If it is desired to place a value on a vacant parcel of land, the first step is to assume a use and a development program. On the basis of these assumptions an estimate of gross revenues (*AZ*) and operating expenses (*CO*) may be made. An estimate is made of the loss in value during the life of the project, usually equivalent to the cost of the improvements. A calculation is then made of the portion of the revenues that must be assigned to replacing the loss and paying a return from year to year on that part of improvement cost which has not been returned (*ABX*). The balance, in the form of a level annuity (*BC*), is capitalized to place a present value on the terminal or liquidation value of the enterprise, usually equivalent to the land. The anticipated loss in value (usually the cost of improvements) and the estimated residual value of the enterprise (usually the land) are added to give a total present value of the proposed enterprise. The effective value of the land is that value which results from the most favorable improvement program, *i.e.*, the highest and best use.

It is now apparent why land income or rent is often said to be residual.

As a practical matter, business decisions concerning the use of land are based on calculations of the return to be produced by alternative uses and various combinations of land improvements. These calculations do not begin with an assigned value for land; such a value is the end product. In the case of a landowner, the question is what development program for the use of the site will yield the highest return; in the case of a prospective purchaser of the land, the question is how much is the land worth in light of the income to be produced under the most favorable development program. Land is residual in the sense of permanence of value. Physically it is nondeteriorating, and, unlike the improvements and structures, rarely becomes valueless. Even when the buildings become dilapidated and uninhabitable, the land, when cleared, has some value. And finally, in an accounting sense, land may be viewed as the residual claimant. Land is generally associated with the equity capital of the enterprise. The financing for most types of projects usually involves a contribution by the entrepreneur of the land and little more. The capital required for the improvements is mainly borrowed. Thus, after operating expenses, the first claim to earnings is debt service, which normally retires the debt at a rate faster than the loss in value of the project. Since the debt is roughly equivalent to the cost of improvements, which, in turn, is roughly equivalent to the loss in value of the enterprise, all revenues after debt service are sometimes considered as the residual return to land. Even when no borrowed capital is involved, *i.e.*, assuming the direct investment of all land and capital by the entrepreneur, accounting practice calls for a depreciation charge to offset the loss in value. Thus net income after depreciation is the return on all capital, both that which is wasting and that which is permanent. But since the landowner would not be justified in investing capital in improvements unless he could secure a return on that part of the total investment, it is reasonable to consider that from his standpoint such a return has first claim, with the return on land as residual.

It is the view of classical economics that land rent is a residual in the sense that land is the fixed factor of production. It is said that urban land is valueless without the application of capital and labor and that, being without mobility, land is fixed and helpless within the local market situation. Capital and labor are considered free to move about, and for any unit of capital or labor there are many optional applications. Thus it is said that the value or price of capital and labor is determined in their individual markets, where the demand that originates from potential land development plays only a minor part. But, it is said, the value of land is a function of the price of capital and labor, for the net return of the enterprise cannot be determined without first placing a value

(usually at the cost of production) on the improvements. The conclusion is that the market price of land is determinable only *after* and in part, *by* the prices of capital and labor, and that therefore land may be considered the residual claimant. This argument is based upon the classical notion, not accepted in this chapter, that land is immobile while the other factors of production are not. We shall attempt to show in later sections that the fact that land is physically immobile has little reference to the economic problem of allocating land. To the extent to which urban land can be put to several uses and to the extent to which a unit of urban land can be substituted for another or can be substituted for capital or labor, land is economically mobile. Rent is no more a residual claimant than are wages, interest, or profits. Each return to a factor of production may be considered surplus or residual, depending upon the type of economic analysis employed; each may be considered as payment to a factor of production according to its productivity. The latter view appears to be simpler, more comprehensive, and on the whole more in accord with reality.

On the basis of the total discussion of land income, it should be clear that the product of the valuation formula is an amount that the entrepreneur would be economically justified in paying for land to be developed under an assumed plan; and that this amount is equal to the value of the entire enterprise at time of liquidation (end of economic life). Thus the so-called "land value" is not truly the value of the land alone, although for all practical purposes it may be so considered. A value figure, so derived, is the basis for all business decisions concerning land utilization, for the entrepreneur seeks to maximize "land return" and thus the value by manipulating the inputs of capital and labor. Thus value is a function of all future returns as foreseen by prospective enterprisers. The returns of the past have no effect, save as indicators of the future. The return for the next year has more weight in determining the value than the return for any other year; but any one year is of small relative importance, since it is the whole series of future periodic returns which is capitalized into the value figure. But there are other value figures associated with land that must be carefully distinguished from capitalized "land return" as here defined. For example, market price may vary widely from this figure. Unusual pressures of demand often force market price well above a value that is a function of future net revenues; at other times, when the real estate market is distressed, market price reflects the distress sales of owners whose equities have been wiped out and whose fixed charges, in the form of taxes and debt service, cannot be met out of currently reduced revenues.

It is a rare thing that cost of reproduction (acquisition cost of land plus

cost of improvements) and value are equal, for the market price of vacant land seldom reflects the income potential with accuracy. This lack of agreement is less rare in the case of residential land, but especially frequent for land suitable for the more intensive uses because of the complexity of the forces bearing on productivity and thus the wide variation in individual forecasts of probable returns.

In the narrow sense valuation is the process of establishing a value figure based upon the most advantageous development program, i.e., the highest and best use, through the formula that capitalizes economic return. But in practice, the need for a value figure is always associated with some specific business decision, such as purchase, sale, advancing of funds secured by real estate, condemnation, or the distribution of an estate. Under various circumstances, the figure most appropriate to the problem may be the capitalized future returns, the market price, or the cost of reproduction. Furthermore, the real estate may be in the form of vacant land or of developed land that may or may not be in the highest and best use.

In the case of a going enterprise consisting of already developed land, the basic formula of valuation is the same as has been described for the valuation of vacant land, but the unknown is the amount of the loss in value rather than the present worth of the terminal value. Since the use is already established and the improvements installed, the given factors in the formula are the expected gross revenue, the operating expenses, and the terminal value of the enterprise, primarily the land value. Thus in this case, to the replacement of and return on that portion of the present value which is to be wasted during the remaining life of the project, is allocated the residual revenue.² The residual revenue, then, determines the waste that the enterprise can support after paying a return on the nonwasting capital and thus the second component to be added to the assumed terminal value to arrive at a present value of the enterprise.

The practical problem of valuation or appraisal of real estate calls for many compromises in applying the basic value formula. Under some circumstances it is very difficult and sometimes impossible to differentiate between the returns that are assignable to the business that occupies the space and the returns that are assignable to the real estate. In other cases, the returns are in the form of amenities or services for which a market value is difficult or impossible to ascertain. Under these conditions, the appraiser falls back on comparisons with the current

² This is the basis of the appraisal axiom that, where an existing improvement is not the highest and best use, the building (not the land) is residual.

market prices for similar properties or on the cost of reproduction as the basis of an estimate of the future value loss.

One of the critical estimates in the valuation process is the selection of a capitalization rate. A small difference in rate will result in a large difference in the final value figure. The capitalization rate is selected to reflect the market return on investments of risk characteristics that are like those of the real estate enterprise under consideration.

Land Return and Economic Rent

If we are fully to understand the factors and processes of land utilization and the place of land economics within the framework of general economics, we must go deeper than the behavioristic explanation of the entrepreneurial calculation of rent that so far has been presented here. We must examine land as a factor in production to see whether it behaves differently from the other factors. We must see rent in its proper place in the price system. We must explore the role of rent as a cost of production or a surplus or as a monopolistic return. These subjects have long been controversial in economic theory. We shall not find space to spin out the involved arguments for the various points of view on rent; rather we shall outline the arguments that support the view accepted here.

Before proceeding with the more controversial issues, certain fundamentals should be reviewed. We are assuming that the profit motive is central, although the motivations that condition business decisions are often mixed. Professor Griffin has listed some of the noneconomic incentives that play roles of varying importance in business decisions involving investment—desire for power, prestige, social approval, the creative desire, the competitive impulse, the desire for independence, social obligation, and ethical standards of business.³ Recognizing that these hedonistic calculations enter into business decisions, we must nevertheless build our theory about the profit motive and view the noneconomic incentives as irregular and secondary.

The economic calculation that determines land use can be made only when, or under the assumption that, a parcel of real estate is available for development; but it is not necessary to assume that the land is vacant and without improvement for the calculation precedent to the redevelopment of improved property is the same as that for the original development of virgin land. The question is simply what combination of land and buildings will yield the highest profit to the enterprise, or, to be more accurate, what combination will produce returns the present value

³ Griffin, Clare E., *Enterprise in a Free Society* (Chicago: Richard D. Irwin Inc., 1949), Chap. 5.

of which will be the greatest. This latter statement recognizes that the present value of future returns reflects the capitalization rate, which, in turn, is influenced by the degree of certainty or uncertainty of the returns. Having evaluated the enterprise, it is possible to determine what would be a justified price, wage, or contract rent for the various factors of production, any one of which can be assigned the residual share if the shares of the other factors are assumed. It is in this fashion that land "rent" or its capitalized equivalent, land "value," can be calculated.

Entrepreneurial rent as determined by the economic calculation is a measure of maximum value productivity, but it is not necessarily the actual market price. In the long run, or in a perfect market, market rent would tend to approach this figure through the forces of competition. Thus, for purposes of theoretical analysis, we are justified in considering entrepreneurial rent as a price at which land transactions are most likely to be consummated. It is a measure of the value productivity of land when combined with other factors of production in such a way as to produce the maximum return on the combination or enterprise and thus on each of the factors, including land.

Land and Capital

The classical economists distinguished land, labor, and capital as the prime factors of production. Modern urban land economics finds little practical value in the pure definition of land as nature because of the fact that land and man-made improvements become so inextricably combined. There is no possibility of actually separating out and measuring the productivity of the "original and indestructible" qualities of the land. We recognize that land provides space and support and that, for urban land, the most significant and valuable quality of the space is location. But the attempt to filter out the contribution of land, as such, to the productivity of the enterprise meets with insurmountable difficulties. To start with the simplest case—agricultural land ripe for urban residential development—we find that its rent is based on agricultural use, which, in turn, reflects a productivity resulting from more or less permanent capital improvements such as fences and drain tile, installed over the years of cultivation. There are few uses of land that do not call for capital improvements, if only roads to provide accessibility. Thus unless the land is unusable for any purpose, and hence a free good, it is highly probable that a part of its usefulness for urban purposes derives from capital improvements or that the contract rent for agricultural use, and hence the acquisition price for urban use, reflects existing improvements to the original qualities of the soil. Even the

notion of location or situs is inseparable from the idea of accessibility; in urban areas and in most rural areas, the accessibility of any site is strongly influenced by man-made capital improvements in the form of roads and public transportation facilities. These improvements, while not installed on the plot of land in question, are important determinants of its economic qualities. Thus we may conclude that the contributions to productivity of the original qualities of urban land are effectively incommensurable for purposes of analysis, since land and land improvements are so inextricably mixed. For all useful purposes, then, land with its existing improvements must be not only the basis of the entrepreneurial calculation of rent but also the factor of production to be employed for analytical purposes in urban land theory.

Following the foregoing line of reasoning, we view urban land as the joint product, "the parts of which can be segregated according to origin only in an arbitrary manner."⁴ In this respect land and other capital goods are similar. But such similarity does not justify a complete merger of land and capital for analytical purposes, for land retains important distinguishing characteristics. For example, the characteristic of location is of peculiar importance in the case of land; this feature rests on the physical immobility of the land and the relative permanence of locational features. The relative durability of land and the relative inflexibility of supply are differences in degree that are sufficient to have considerable economic significance.⁵ It is an important basis for separate treatment that rent and interest do not move together; in fact, they often move in opposite directions, for the levels of rent and interest are determined in markets that are essentially distinct and through processes that are quite different. For example, the urban land market is largely local in scope while the market for most capital goods is much broader.

In summary, rent is the return on a joint product, of which land is a major component; thus for our purposes land is not the pure gift of nature but that processed commodity which is bought and sold as land in the urban land market. Though land and capital have much in common, it is useful and practicable to distinguish between them.

Rent as Unearned

The classical economists viewed rent as a surplus income, *i.e.*, the difference between costs of production including entrepreneurial return

⁴ Bye, Carl Rollinson, *Developments and Issues in the Theory of Rent* (New York: Columbia University Press, 1940), p. 80.

⁵ From a purely physical viewpoint, land as space and support is absolutely permanent and limited in supply.

and the selling price of the product. This surplus was said to appear on all but marginal land (or at the intensive margin), where the value of the product was just equal to the cost. Rent was considered to be unearned, a bonus to the landlord reflecting the excess in the natural fertility of the soil above the marginal land. Rent has been treated as exploitative and as having some of the characteristics of a monopoly income.

All the foregoing notions tend to set off land as a factor of production with unique characteristics, unlike labor and capital in economic behavior. We do not accept this view; to the contrary, we view land as a factor of production with an economic behavior little different from that of the other basic factors. We incline to the view that rent is a return to land for the contribution that it makes in creating want-satisfying goods and services; rent is compensation for the productivity of land in the same sense that wages are the payment for the productivity of labor. Land is valuable because it is scarce in supply in relation to the demand for its services. Rent is no more unearned than wages or interest, save in an abstract sense; in the same sense, wages might be considered in part a return on innate human intelligence. Rent is not exploitative for it takes nothing from the worker, from the owner of capital goods, or from the consumer; rent is a measure of contribution not of extraction or reduction.

Rent as a Monopoly Return

The monopoly characteristics of rent call for special consideration, since urban (but not agricultural) rents are said to have elements of monopolistic return. Monopoly implies control over the productive agency and restriction of output; this cannot occur when free competition exists. But it is argued that retail locations, for example, possess unique features, for each site is the focus of its own special set of locational characteristics; it is most convenient to a given set of potential customers for a certain commodity or service. But this line of reasoning is not consistent with the marginal productivity approach to the explanation of rent. For each urban site there is a large number of optional uses, and, as explained in an earlier section, there is a strong tendency for each parcel to be used for that purpose which will yield the highest return to the enterprise. The result of this process, which is a competitive process, is an arraying of all the sites in a hierarchy of land values, each value for each site predicted on a given use. But with rare exceptions all sites could be used for any one of the many alternative purposes, and most of the various land uses could

be productive in some degree on any of the sites. The process of fitting site and use is a competitive one, hardly suggestive of monopoly.⁶

Certainly the fact that some combinations of site and use are more productive than other combinations cannot be said to be monopolistic. Landlords, holding sites of various locational qualities, simply sell to the highest bidder. And for any one site there are many bidders, for each user has a wide choice of location; for most uses there are many sites of substantially the same quality, and profitable operation is possible over a considerable range of qualities. The central retail area is often used as an example of a unique and hence a monopolistic location; and the "hot spot" or "100 per cent" block or corner at the main intersection, where peak land values are found, is cited as the ultimate in locational monopoly. The owner of the best corner, however, cannot set his own price, for the bidders for his land have other choices, other locations not quite so favorable for their purposes but still favorable enough so that an attractive return can be produced. The upper limit for the rent of the best corner is set by the productivity of that use which can best exploit it. If the landlord demands a higher rent, the prospective user will prefer another location of slightly less quality from his standpoint but where his return after paying rent will be higher than if he had rented the best location at a rent in excess of its productivity.

The central business districts in many cities testify to the lack of monopolistic control exercised by landowners. The competition of outlying retail centers is well known and many associations of central area owners have been formed to fight off this threat. In some cities, the size of the central area has actually decreased at the same time that the population of the community was increasing. The widespread phenomenon of the decentralization of retail services demonstrates that there is no effective monopolistic limitation, either natural or artificial, on the number of sites where various retail services can be performed at a profit. The same observation applies to all classes of urban land use.

Rent and Price

It was the classical view that rent bore a unique relationship to price; that rent was not, like wages and interest, a cost that was a determinant of price. Rent was held to be price determined, not price determining; rent was a result of, and moved with, the price of the end product to which the land contributed as a factor in production.

⁶ Cassel, Gustave, *The Theory of Social Economy* (New York: Harcourt, Brace & Company, Inc., 1924), p. 19.

But our view is quite contrary, for we hold that there is no difference in the relationships of wages and price, interest and price, and rent and price.⁷ In the equilibrium explanation of prices, the distinction between price-determined and price-determining factors disappears.

Although marginal cost and market price tend to be equal, no special significance is accredited to the marginal units nor to their cost of production. All units of supply and of demand are considered to be equally important in the pricing process. The margin is simply the point at which the interaction of the total supply and total demand establishes an equilibrium. This equilibrium not only sets the price of the product, but, simultaneously and in conjunction with other related equilibria, it determines the rewards of production agents. Accordingly, neither the prices of finished goods nor of production factors are wholly causes or wholly effects. Rather, they are all interdependent parts of a complex process, branches of which extend throughout the entire economic organization.⁸

Essential to this view of rent is an understanding of the economic mobility of land. Though physically fixed, there is a significant portion of the land supply of various grades that is appropriate for alternative uses. That portion is sufficient to impart to land the quality of mobility that is essential to participation in the competitive-equilibrium process of price determination.⁹ Thus the amount of land that may be employed for a given use is not effectively limited; land shifts from employment to employment, seeking the highest reward. The same shifting may occur in the demand for some commodity or service; as a result the amount of land devoted to such use tends to seek readjustment to the new situation. The result may be a considerable reapportionment among related land uses until equilibrium is restored.¹⁰ This economic mobility tends to maintain equal rents for lands of the same quality that are in different uses. Thus in opportunity costs, *i.e.*, in this case the rents that can be paid by competing uses, is found the explanation for the cost status of rent. Tenants must pay rents high enough to outbid competing uses; the prices of the commodity or service must be sufficient to permit the payment of the market-determined rent. Prices cannot be raised, even in the best locations, without soon reaching a point where buyers prefer to purchase the same commodity at a slightly less convenient location but at a lower price.

⁷ Bye, *op. cit.*, p. 98.

⁸ *Ibid.*, p. 94.

⁹ Johnson, Alvin S., "Rent in Modern Economic Theory," *American Economic Association*, third series, vol. III, no. 4, p. 101, November, 1902.

¹⁰ Bye, *op. cit.*, p. 97.

CHAPTER 13

CITY GROWTH AND STRUCTURE

Basic Theory of Land Use Structure

The analysis of land income and value in the preceding chapter has laid the groundwork for a study of the internal arrangement of land uses in urban areas and for an examination of the principles of urban growth. In discussing the economics of urbanization in Chap. 2, it was the underlying hypothesis that the locational pattern of urban areas is a reflection of basic economic forces and that this arrangement of people, buildings, and activities in urban concentrations at strategic points on the web of transportation lines is a part of the economic mechanism of society. This hypothesis is supported by the observation that the primary factors in establishing and in changing this pattern of urban areas are economic. We now move to extend this hypothesis in its logical application to the internal structure of cities.

It is an observable phenomenon that, as cities grow and mature, there tends to evolve a rational pattern of land uses, a basic structure composed of the several functional areas in which are concentrated the major urban activities such as retailing, manufacturing, recreation, and so on. The same basic tendencies appear in all cities in spite of minor differences resulting from variations in topography, size, and maturity. The underlying pattern is apparent even though it is often modified by irrational real estate developments or special physical conditions. If it can be assumed that urbanism is basically an economic phenomenon, it is a logical deduction that the internal organization of cities has evolved as a mechanism to facilitate the functioning of economic activities and that the apparently haphazard arrangement of use areas does have an essential order.

Increasing specialization of function has characterized the evolution of our present complex economic organism. The city, considered as an economic mechanism, has exhibited the same tendency toward increasing specialization of site function concomitant with the maturing of the

urban structure. As villages grow into towns and towns into cities, there is evidenced an increasing tendency for uses of like character to become concentrated in functional areas. In the several residential districts, the growing segregation of social and economic groups of the population is reflected in an increasingly variant quality of housing. Industrial areas begin to take shape. Within the retail and commercial districts, there appears a pronounced tendency toward sectionalism, a clustering of like uses. Through a process of economic selection, the city begins to acquire a definite land use pattern.

In general, complexity breeds specialization and necessitates systematic organization. In manufacturing, the more complex the process, the more specialized are the functions and the more highly organized are the operations. And so it is that growing cities, with an increase in the complexity of the social and economic functions performed within them, tend to rearrange the uses of land in order most effectively to facilitate these activities.

It is characteristic of specialization in any field that those persons or materials or locations best adapted to a particular function or operation gravitate toward the performance of that function. This is true in urban evolution. The utilization of land is ultimately determined by the relative efficiencies of various uses in various locations. Efficiency in use is measured by rent-paying ability, the ability of a use to extract economic utility from a site. The process of adjustment in city structure to a most efficient land use pattern is through the competition of uses for the various locations. The use that can extract the greatest return from a given site will be the successful bidder. The outgrowth of this market process of competitive bidding for sites among the potential users of land is an orderly pattern of land use spatially organized to perform most efficiently the economic functions that characterize urban life.

The ideal land use pattern is, of course, never attained. Site bids are too often matters of trial and error. The complexity of the forces impinging upon each site precludes any accurate measurement of its future utility. The widespread use of leases tends to perpetuate errors in site selection and to delay the process of rearrangement. Finally, the perpetual evolution of our economy, technological change, and social mutations are continually creating alterations in economic functions and giving rise to maladjustments in city structure that can be corrected but slowly and painfully.¹

¹ Ratcliff, Richard U., "The Problem of Retail Site Selection," *Michigan Business Studies*, vol. IX, no. 1, University of Michigan, 1939.

Competition of Uses

Having stated the underlying theory of city growth and structure, the next step is to present the rationale and to tie in the argument with the logical progression of principles and ideas that grew out of the discussion of land income and value. We have attempted to demonstrate that economic rent for any urban site is the measure of its productivity under the most advantageous development plan. Since the maximization of entrepreneurial return is the basic objective of the development and use of land, it follows that productivity in terms of economic rent is the touchstone of all business decisions relative to land either by the owner or by a prospective purchaser. Value is the capitalized expression of economic rent.

For a given location, different economic rents will be produced by varying the nature and the proportioning of the outlays, in terms of capital and operating expenses, that are applied to the land. The same outlays applied to the same location at different times will produce different returns, for the factors that influence the productivity of locations are subject to constant change; or the same outlays applied to different locations will produce variant returns. Thus it may be said that the character of the location is the prime determinant of the level and future pattern of gross revenues that may be produced under various development programs; and the development program in terms of capital outlays and operating policies is the determinant of the distribution of the revenues. The productivity of the site is variable and is determined by forces that are external to the location and are little influenced by the nature of the development of the site. On the other hand, once the site is developed and the capital committed in the form of buildings, it is relatively fixed and permanent and is vulnerable to independent, external forces. This characteristic has been referred to as "fixity of investment."²

The physical structure of the city, the pattern of economic activities, and to some extent the social structure, are created by the individual decisions of landowners and entrepreneurs with respect to the development of specific sites. These decisions are based on the judgments of the individuals as to what development program will yield the highest returns for each location. A wide variety of choices is open to the landowner, first, among different use types, and, for each use type, among various patterns of outlay of capital and operating expenses. Thus, for a given site, it may be a choice between an apartment house and a re-

² Dorau, H. B., and A. G. Hinman, *Urban Land Economics* (New York: The Macmillan Company, 1928), p. 164.

tail development, or a combination of the two may be a possibility. And for each optional use, there is the question of how large a development, how many stories, what type of construction, and what management policy. Thus there is said to be a competition of uses for each site, with that use winning out, in the ideal situation, which can most successfully exploit the revenue potential of the parcel.

The mechanics of the market should now be clear, the various land uses bidding, in effect, for available sites, with investors and landowners making their choices from the profit motive as in any other market. But we must now take the next step in analysis and try to understand why certain land uses can most successfully exploit certain sites. The basic problem in land economics is the relation of the use to the site; the basic economic process is the evaluation of space relationships.

Minimizing the Costs of Friction

When a housewife is planning the kitchen for her new home, she seeks a physical arrangement of facilities—equipment and storage space—that will minimize the number of steps that must be taken in preparing a meal. Sink, stove, refrigerator, and storage space must be as close together as possible but not so close that there will be undue congestion and interference. The places where related functions are carried out must be adjacent; refrigerator, sink, and stove should be contiguous to permit line-production operation. In the storage spaces, items that are associated in use should be near each other; all spices are to be stored on one shelf. The dining-room china and silverware should be in the line of travel from sink to dining-room table. This problem in space relationships is parallel to the problem of creating an efficient city structure within which all the functions of working and living can be carried on with the minimum of time and money cost of transportation. Haig has pointed out that the underlying objective of city planning is to minimize the “costs of friction,” defined as the sum of transportation costs and site rentals, for the aggregate of all necessary land uses.³ Thus Haig writes, “The best planned city is one where the aggregate site rents are least and the transport system is superior or both.”⁴ He explains that rent is the charge that the landowner can levy in return for savings in transportation costs.

Rent appears as the charge which the owner of a relatively accessible site can impose because of the savings in transportation costs which the use of his site

³ Haig, R. M., *Major Economic Factors in Metropolitan Growth and Arrangement* (New York: Regional Plan of New York and Its Environs, 1927), p. 39.

⁴ Haig, R. M., “Toward an Understanding of the Metropolis,” *Quarterly Journal of Economics*, vol. 40, May, 1926, p. 422.

makes possible. The activities which can "stand" high rents are those where large savings in transport costs may be realized by locating on central sites where accessibility is great. . . . While transportation overcomes friction, site rentals plus transportation costs represent the social cost of what friction remains.⁵

Site rents and transportation costs are complementary, as illustrated by the fact that, as the distance to the center of the city increases, transportation costs increase and rents decline, though the sum of the two is not constant.

It is an interesting corollary of the complementary character of transportation cost and rent that a *general* reduction in transportation costs, i.e., an increase in population fluidity, will tend to reduce all site rentals. Thus, the spread in the use of private automobiles has, in fact, tended to reduce site rents in central business locations by making outlying retail centers more generally accessible. On this point Haig writes, "An improvement in transportation, *ceteris paribus* will mean a reduction in friction and the diminution of the aggregate sum of site rentals. Thus, transportation costs and site rentals are complementary and may be termed the "costs of friction."⁶ Site rent and transportation costs are complementary in the sense that prospective users of the sites adjust their bids for various sites in accordance with the savings in transportation costs that the use of the sites will permit. Differences in rent reflect differences in accessibility or transportation costs among sites; thus a general reduction in all transportation costs will reduce the amount of these differences and thus will tend to equalize the site rents. Better general transportation reduces the difference or relative advantage in convenience of the central business district over outlying districts.⁷

Each land use seeks the lowest total of rent and transportation costs. The opportunity to minimize the total is limited for any one land use by the competition of lower uses, which are willing to bid up to the savings in transportation costs that the use of the site will permit them.

So far the discussion has been in terms of minimizing transportation costs. Transportation cost is not a one-dimensional concept. Not only must the cash cost be reckoned with but the travel time as well; for 10 cents, a passenger may travel a few blocks or many miles in Manhattan. Inconvenient, uncomfortable facilities may add to the disutilities of travel. Another dimension is frequency of travel, which might be measured in terms of passenger-miles during a given period of time.

⁵ *Ibid.*, pp. 420-421.

⁶ *Ibid.*, p. 422.

⁷ Improvements in transportation which benefit only one area will, of course, result in higher rents in that area.

Finally, the disutilities of travel must be evaluated against the whole system of values of the social groups who are involved in the travel. The differences among groups may be illustrated by the considerations that are controlling in the selection of a place of residence. Families with children seek proximity to schools and to healthful and wholesome surroundings often at the expense of convenience to place of work. Some groups with strong religious ties tend to cluster about the church. Newly married couples without children prefer central locations that are convenient to the workplaces of both husband and wife and to amusement centers. Not only do systems of convenience-desirability vary among social and cultural groups, but also among all groups with time, for customs change and new activities take on new importances.

Location or Situs

Now let us shift our attention to the significance of the term "location." At any given point in time, each urban site is fixed within a set of space relationships with all other sites; this set of space relationships has significance mainly in terms of the use that is made of all other sites and the human activities that go on at those points. An unused site has no significance save that it pushes other used sites that are beyond it one more step away; this fact may be of importance if the unused parcel is in a retail area, for it breaks up a continuity of store fronts and diminishes shopping convenience in that area. Though the complex of space relationships is fixed for each site, the economic effect of this same set of relationships is quite different under the various possible programs for the development of the site. On a central retail district site, for example, the proximity of a department store would be of great value if a retail use were assumed but of negative value if the site were to be used for residential purposes. That site which for any given land use is most advantageous is that site where the particular set of space relationships is most favorable for that use and can be translated into an economic rent-paying capacity that is greater than is possible for that use on any other site. That land use which for any given site is most advantageous is that use for which the set of space relationships associated with the site is more favorable than for any other use, and which, therefore, can bid the highest for the location.

For many land uses, convenience to the greatest number of people is a prime requisite. Thus land in the center of the city, at the focal point of transportation routes, is greatly sought after and commands a high economic rent. For other use types, convenience to special groups is most important, as in the case of a factory that locates with a view to the convenience of the employees in traveling to and from work. But the

factory also must consider convenience to transportation facilities for raw materials and finished products; and for some types of manufacturing, proximity to unlimited water supplies may be essential. Haig indicates how each business enterprise or human activity can be broken down into functions and how for each function a different set of space relationships is most advantageous.⁸ Thus in large, mature cities, there is a competition among functions for favorable locations, and the bundles of functions that normally comprise some of the familiar land uses are sometimes split and certain of the functions carried on in areas of lower rent. A department store, for example, may sell some of its merchandise from samples, to be wrapped and delivered from a warehouse at some distance from the central retail district. An enterprise that involves many functions, with the most favorable set of space relationships being different for each function, is faced with a complex site problem, which requires the balancing of advantage for one function against disadvantage for another.

It has been previously stated in this section that the complex set of space relationships with other urban activities that focus on any one site has a different significance for various types of land use. Each use or function may be said to have a relationship with a special tributary area within which are those activities and facilities which give meaning to the location for the use. These tributary areas, like the trading area of a city, are irregular in shape. The significance of the area to the use is only incidentally measured in terms of two-dimensional space; it is measured in terms of amenities, shopping facilities, churches, schools, interest groups, purchasing power, population density, railroad terminal facilities, or whatever factors have significance for a particular land use.

The tributary areas of retail uses are, in general, measured in terms of population, frequency of purchase, and purchasing power. With some exceptions the larger the tributary area as measured in these terms, the higher the rent-paying capacity of the retail type. The high-class ladies' dress shop has a small tributary area in terms of area and population, but one of very high purchasing power. The centrally located variety store has the whole community as its tributary area with low average purchasing power but wide extent and high frequency of purchase. Each retail type has an optimum size of establishment, which is related to the nature of the tributary area. The large department store, which feeds on the entire community, including the outlying suburban towns, is limited in size by the economic dimensions of the area and may grow as the metropolitan area develops. The neighborhood grocery store,

⁸ Haig, *Major Economic Factors in Metropolitan Growth and Arrangement*, p. 36.

whose tributary area is a few blocks in extent and covers but a few hundred households, cannot expand its operations once the neighborhood is built up; the tributary area is limited in extent by the presence of other neighborhood grocery operations in surrounding neighborhoods, each of which has its own zone of influence.

Many urban land uses and functions are not competitive in the sense that they find the same sites advantageous. High-class residential neighborhoods seek to avoid railroads, while industries seek proximity to freight service. Low-priced homes do not compete for the hillside locations, which are often used by the well-to-do for their dwelling sites, because it is more costly to build on uneven terrain than on level ground. But where competition does go on, as it does for much of the urban area, it is competition that is one of two kinds: competition of uses, each of which finds a special and different advantage in certain of the space relationships that characterize the site; or it is a competition of uses of similar character, in that each use seeks to exploit substantially the same set of space relationships. In the first instance, an example would be the competition of a manufacturing plant and a residence for a river-side site, for each use finds a different set of values in the location. In the second case, which might be the competition of two types of retail stores for a central location, there is a common advantage in being at the spot most convenient to the greatest number of people. As will appear later, in a discussion of the considerations in retail location, the use that has the highest rent-paying capacity is that use for which the most convenient location is preferred by the greatest aggregate purchasing power expressed in terms of volume of purchases and purchase price.

In summary, one might say that the structure of the city is determined through the dollar evaluation of the importance of convenience. The various potential users of urban land are concerned with different aggregates of convenience, which reflect each special combination of functions in one enterprise. For certain uses, one type of convenience may be highly essential, another type a matter of indifference. In the case of residential use, the focus of space relationships is outward, for the convenience of the householder is the determinant of the economic rent. In the case of the retail store, the focus may be said to be inward, from the potential customers within the zone of influence, for it is the convenience of the customers that is translated into rent-paying capacity. For industries, convenience has its measure in costs of production. A good illustration of the principles so far discussed can be found in the retail areas of the city.

*Retail Location Characteristics and Buying Habits*⁹

In this discussion of city growth and structure, the theory has been advanced that, if the pattern of general use areas within the city is the product of economic forces, then as a logical extension of this assumption, it may follow that the special internal pattern of each functional area is of economic origin. Thus, in the central business district of a large city the structural arrangement of land uses might be represented as constituting an economic machine whose parts have been arranged and rearranged until there is approached the maximum of efficiency in the performance of its commercial functions.

The first step in demonstrating the underlying hypothesis, *i.e.*, that there is present in the growth process of retail areas an economic causation that gives form and reason to the matured district, will be an attempt to explain the existing retail groupings in economic terms. Such an explanation must be based on an analysis of the economic functions of the area and a differentiation of the various retail types with respect to their special functions. The approach to the analysis of the several types will require an interpretation of the buying behavior of consumers in purchasing various retail items.

Merchants select and bid competitively for sites for their stores from among optional locations on the basis of their predictions of net return. If retail productivity were not affected by location, there would be no site competition among merchants. Rent would be a minor consideration and would be determined by the productivity of the land in some utilization that is in competition with retail use. In practice, however, for any given retail site there are ordinarily a number of potential bidders representing different retail types. The maximum rent bid of each merchant is determined by that amount which would leave a balance of net profit after rent that is just greater than could be earned by operating a store on any alternative site in light of the amount of the rent that would be necessary to outbid other merchants. The determination of this maximum requires an estimate of the volume of gross sales, costs of goods sold, and operating costs for a hypothetical store on the site under consideration and on each alternative site. It might be said that the successful bidder for any site will be that merchant who can most profitably exploit the location.

The most important variables among the determinants of the maximum rent that any merchant can afford to pay for a site are the volume of sales and the selling prices of his merchandise. Both of these items are

⁹ This material is based on Ratcliff, *op. cit.*, Chap. 4.

functions of location, though in varying degrees. To be sure, other factors influence site bids, as for instance the required capital investment in new construction or remodeling and in fixtures. However, the general convenience of the location for potential consumers and the relative convenience of the site as compared with the locations of competitors are factors of major importance.

The ability of a given retail type to exploit a certain site—and thus the site bid of the retailer—depends not only on the number of potential customers but also upon their buying habits and motives. It is a natural impulse of consumers to wish to reduce to a minimum the disutilities of purchasing. These disutilities consist in time and money costs that must be added to the costs of the goods ultimately purchased. This general desire for efficiency in purchasing applies to all goods, but in varying degrees of intensity for various types of goods. The importance of minimizing the disutilities in buying is conditioned by a complex of values in the mind of the prospective consumer, such as the desire for comparison, the immediacy of the need, the economic importance of the article, the frequency of purchase, and patronage preferences. The significant evaluation of these factors is, of course, the collective evaluation, *i.e.*, the sum of the individual evaluations of all the potential consumers. Where comparison shopping is a habitual part of the buying process, the consumers prefer that stores selling a similar type and grade of the commodity be grouped. Collectively, the consumers indicate the importance of such a geographical arrangement by the volume of their patronage and, in some cases, by a willingness to pay a price premium. For example, a tobacco shop in the middle of the block on a quiet side street will have a small volume of sales because most smokers habitually purchase cigarettes and cigars at points convenient to their places of occupation or directly in the course of their travels in shopping, in the conduct of their business, in going to and from lunch, or to and from home. At a football or baseball game, consumers willingly pay a dime for a bag of peanuts that they could secure for a nickel by going across the street. The convenience and timeliness of the offer offset the premium in price. A furniture store may do well on a quiet side street, for the typical family buys furniture infrequently and on such special occasions is not averse to traveling to a relatively out-of-the-way spot. Ladies' wrist watches could not be marketed successfully at a ball park, since a purchase of this kind requires careful consideration, comparison, and considerable time.

A common division of retail goods on the basis of buying habits is that developed by Copeland, who classifies retail articles into three groups—

shopping goods, specialty goods, and convenience goods.¹⁰ This is a useful classification, but for our purposes a somewhat more refined device for characterizing retail types with respect to the buying habits of their customers is required. The following aspects of the shopping or buying act have been selected as of especial significance as determinants in the orientation of the several types within the retail structure.

Purchaser. One of the major determinants of location for any retail type is the family purchasing agent who characteristically shops for the goods offered. The buying habits of men and women are substantially different. Women enjoy shopping; men dislike it, in general. Women are more patient and thorough in appraising the market. They organize their buying in shopping expeditions. They are more observant, more susceptible to display, and hence indulge more generally in impulse buying. Men are more hurried in their shopping, impatient, and prone to buy the first article that approaches their requirements or taste. Convenience is more important in their minds, and the opportunity for comparison is less important. While this characterization of the buying habits of men and women generally obtains, it is less true in the purchase of certain articles such as sporting goods and mechanical equipment, in which men have a particular interest. Shopping for a tennis racket may be a pleasure for the sportsman, and the mechanically inclined man enjoys analyzing and comparing the specifications of automobiles or radios.

For certain articles and on certain occasions, husband and wife shop together. Whether the buying technique is predominantly feminine or masculine depends upon the balance of power in the family or upon the nature of the article. If it is mechanical, the husband may do the preliminary shopping alone, bringing in his wife for the final decision. Where selection is a matter of taste, the wife is the probable determiner of the buying technique.

Postponability. It is evident that variations in the intensity of desire may affect the evaluation that the purchaser places on convenience. The forces that actuate individuals to consummate a purchase vary in intensity and import with individuals and with commodities. For the majority of articles purchased at retail, the fulfillment of desires is postponable, sometimes for hours, sometimes for weeks and months. On occasion, however, the impulse to buy is the instant reaction to the display of an article, and the purchase is effected without much consideration. Finally, the desire for some good may be impelling, such as the craving for tobacco, and demanding of prompt satisfaction.

¹⁰ Copeland, Melvin T., *Principles of Merchandising* (New York: McGraw-Hill Book Company, Inc., 1927), p. 13.

Selection. The process through which the final selection of an article is made is a matter of importance in the location of the store that sells it. In some cases, the article is preselected, *i.e.*, the purchaser determines in advance of the shopping trip the type, quality, and perhaps the brand that he intends to buy. Again, many articles are purchased only after a market comparison. In such cases, the proximity of a number of competing stores is advantageous. In some cases, the purchase is made after inspecting the offerings of a single store, without shopping among several outlets. Impulse buying may be characterized by the absence of comparison, although for some articles, such as neckties, some comparison may precede purchase. Goods that are subject to this type of buying are best displayed in locations of maximum exposure to the view of potential customers.

Frequency. Frequency of purchase affects the importance of convenience. Other things being equal, the greater the frequency, the more important the convenience of location.

The more significant aspects of the buying act which have been described—the purchaser, postponability, the process of selection, and the frequency of purchase—are derived in large part from the qualities of the commodity. Bulk, weight, fragility, and perishability all are factors. Bulky and heavy objects are not purchased on a shopping expedition that is dependent upon public transportation unless the store provides delivery service. Perishable items, like flowers, are likely to be bought on the way home or ordered by telephone for delivery. The economic importance, or value, of the article may determine whether the purchase is made as an incidental part of a general shopping trip, or whether husband and wife together make a number of special shopping trips before arriving at the decision to buy. Value is also a factor in establishing the frequency of purchase. The character of the article and the nature of the considerations that prompt final selection determine in part which member of the family acts as purchasing agent. The larger mechanical articles are frequently purchased by the husband, while the fashion goods are usually purchased by the wife. The quality and price range of the goods offered point to the patronage group which comprises the potential consumers. The buying habits of working-class women in shopping for cheap house dresses are quite different from the behavior of wealthy ladies in search of tea gowns. Postponability is affected by the importance of fashion and the rate of change in fashions.

Convenience-desirability

The purpose of the foregoing analysis of buying behavior has been to demonstrate that there exist differences in the weights attached to the

convenience of location in the purchasing of various articles by various consumer groups. In shopping for dresses, women place a high value on the convenience of a close grouping of competing outlets that facilitates comparison. Thus a group of dress shops congregated in the central business area will do a greater gross dollar volume of business than the same number of shops scattered throughout the residential areas. This is true even though, under the latter circumstance, every potential customer might find at least one shop more convenient than the downtown grouping of shops. On the other hand, in the purchase of groceries, convenience to the home is highly important because of the frequency of purchase, bulk of the articles, relative unimportance of comparison, and relative immediacy of the need. In the purchase of tobacco by men, the intensity of the desire for the article and the frequency of purchase place a premium on locations convenient to points of consumption in central areas or centers of employment for men. On the other hand, the high economic value of an automobile and the infrequency of purchase result in attaching much less importance to convenience in the location of automobile salesrooms, but some greater importance to the proximity of competing outlets. Examples can be multiplied to illustrate the variance in the weight placed by a given consumer group on the disutilities in purchasing various articles. Each consumer group expresses the relative convenience-desirabilities for the various commodities in terms of number of purchases and price of the article. Thus on the site most convenient to a given consumer group, the retail store offering the article rated by that group as first in convenience-desirability will thrive better than any other retail type.

The concept of relative convenience-desirability as among retail goods may be further clarified by considering the fact that convenience is one of the important services offered for sale by retail stores. The subjective value which consumers attach to that service, as with other commodities and services, varies among individuals and with respect to the retail articles offered at convenient locations. In spite of these individual variations, there appears to be sufficient of a common mind in consumer groups to create a general hierarchy of convenience-desirabilities among retail types.¹¹

The foregoing argument could be further refined, but there is danger of obscuring the central theme, *i.e.*, that consumers finally determine retail location by expressing their evaluations of the convenience-desirabilities

¹¹ Closely related to the idea of convenience-desirability is the concept of "situs," a quality of urban land imparted to each urban site through the "consensus of human choice" with respect to its relative appropriateness for optional utilizations. See Dorau and Hinman, *op. cit.*, p. 167.

for the several articles and services in terms of volume of purchases and purchase price. Thus the differential productivity of various retail sites arises from the differences in the aggregate amount that various consumer groups are willing to pay for convenience in the purchase of various articles.

Analysis of Retail Structure in Terms of Buying Behavior

The next step in demonstrating the relationship of buying habits and retail structure is to analyze the use types that show tendencies toward geographical grouping. If these groupings can be explained in terms of buying habits, we shall have support for the hypothesis just presented and a basis for analysis of specific sites with respect to the appropriateness of various retail types.

Statistical description is not necessary to establish the fact that the most significant and most highly crystallized grouping is that of the women's shopping goods stores. In every central business district, the popular-price dress shops, women's shoe stores, hosiery shops, and hat shops are found in proximity to one another and closely associated with department stores and variety stores. This district, at the focal point of the transportation system and most accessible to the greatest volume of purchasing power, is the core of the retail area.

In the larger cities there are likely to be two women's shopping areas—the popular-price district, as described, and a concentration of fashionable apparel shops, which may be situated several blocks away and out of the congested central core. Let us analyze these demonstrable facts in terms of the aspects of the buying act that have been outlined. For each type of goods offered in the women's shopping goods grouping of stores, we find that the customers are women. While this is somewhat less true of variety stores, it is a fact that 90 to 95 per cent of variety sales are made to women. In each case, the fulfillment of the desire is postponable and purchases are made only occasionally. Again, the purchase of items in a variety store is more frequent than the purchase of apparel. There are important differences in the method of selection. Dresses, shoes, and hats are purchased only after due comparison. For hosiery buying, preselection and inspection are more characteristic, although comparison of price, color, and style characterize much of the buying. Purchases in variety stores are to a large extent matters of selecting an item from among the goods offered in one store. Shopping is indulged in to some extent, and impulse purchases are common.

The grouping of apparel shops in the popular-price range can be readily explained in terms of the buying characteristics that have just been discussed. To facilitate comparison of the offerings, the convenience of one

shop to another is important to the customers. The common practice of indulging in shopping expeditions involving visits to a number of different types of outlets encourages the clustering of those shops which are most frequently the objectives of multiple-purchase forays. The most frequent combination involves department stores, apparel shops, and variety stores.

Variety stores are found in this combination not primarily because of the considerations of comparison that account for the grouping of apparel shops, but mainly because small purchases of goods typically offered in variety stores are normally incidents to a shopping expedition. In larger cities particularly, women rarely go downtown specifically to buy an item at a variety store. Rather, they accumulate their needs in various lines until it is worth while to make the trip in the interest of buying a number of items. It is a boon to the customer, therefore, to find the variety store conveniently located with respect to outlets of types frequently included among the objectives of a shopping trip. It is significant that the variety chains deal in articles of small bulk and weight, not difficult to stow away in a shopping bag and to carry home with the other spoils of the afternoon. To the extent to which purchases in variety stores are impulse purchases, variety outlets are parasitical, drawing customers from the traffic stream composed of individuals who may have primary missions in other stores. To a large extent, however, the visit to the variety store is as much a part of the shopping expedition as the visits to the other shops.

The separation of the women's high-class apparel stores from the popular-price districts can be explained in terms of the buying habits of the women of well-to-do families. For one thing, their mode of transportation differs from that typical of shoppers in the popular-price area. The women of the upper income group, instead of using mass transport facilities, are accustomed to employing their private automobiles for shopping. Thus there is less reason to locate the high-price district at the exact focus of mass transportation routes. In fact, there is a distinct advantage in avoiding the congested center and in locating in a situation most accessible by automobile to the fashionable residential areas. Furthermore, the buying of items of small economic importance and of no style value is often delegated to the servants by this class of people. The shopping of the upper income group is less actuated by price considerations and more by considerations of quality, prestige, and fashion. Articles that the lower income groups buy in variety stores and popular-price department stores are purchased by the well-to-do at high-grade department stores and specialty shops.

Fur stores might seem to be a logical companion for women's dress

and shoe stores. It is true that some of the ready-to-wear stores and all department stores feature furs at certain seasons. However, fur specialty stores are characteristically found on the fringes of the women's shopping area. This fact might be explained by the relatively high economic importance of furs and the relative infrequency of purchase. A fur coat is not acquired as an incident to a shopping expedition. It is a matter requiring careful consideration and considerable comparison. The very importance and infrequency of the purchase result in attaching a lesser weight to convenience in the location of the outlet than in the case of other women's shopping goods.

Jewelry stores are most likely to be located on the periphery of the women's shopping district. In the large cities, fashion jewelry stores are often found in the vicinity of the high-grade women's wear district. The popular-price jewelry stores and credit jewelers are found on the outskirts of the main women's area or on side streets just off the main shopping street. There are several reasons why customer preference rarely permits jewelers to compete successfully for the choice sites in the women's district. In the first place, as in the case of furs, many items offered by jewelers are of relatively high economic importance and purchased but infrequently. Furthermore, a substantial proportion of the customers are men. Comparison is of importance, particularly to the women customers, but the relatively high price of the items and the postponability of the purchase warrant leisurely shopping that may involve visits to a number of widely separated shops over a period of days. The fact that there is little tendency for jewelry stores to seek one another's company suggests that jewelry buying does not involve intensive and immediate comparison among different outlets.

Furniture stores are characteristically on the outskirts of the central business district. The very bulk of the stock requires a large display and storage space and constitutes a handicap in competing with other uses for choice sites. As in the case of other goods of relatively high unit value, purchases of furniture are infrequent. It is customary for man and wife to make a special occasion of furniture shopping before the final selection is made. Convenience and accessibility, then, are of secondary importance. These characteristics also explain the fact that there is a great diversity in the uses found associated with furniture stores. Since shopping for furniture is not customarily an incident to a general shopping expedition, there is no strong incentive to locate near other particular types.

The foregoing analysis of retail structure in its relation to consumer buying behavior has been designed to demonstrate that the retail structure assumes a predictable form because of variations among retail uses

in the importance to consumers of convenience at various locations; that consumers, in the aggregate, express the relative convenience-desirabilities in the volume and value of their custom; and that the retail pattern, at least in its mature form, is an expression of the collective will of the patrons of the several retail outlets.

It has been recognized by students of land utilization that there exists among retail use types a hierarchy of rent-paying abilities.¹² Certain of the retail types appear to possess an inherent capacity to pay higher rents than other types. While such a hierarchy undoubtedly exists, previous discussions of it have failed to emphasize the true nature of the differential exploitive abilities that it reflects. Correctly defined, the hierarchy is not one of retail uses alone, but of retail uses *on appropriate sites*. Though department stores pay higher rents than grocery stores, this situation obtains only when department stores are properly located, for were a department store situated in a neighborhood retail cluster it could pay no rent at all. It should be further stated that for each site there exists a hierarchy of uses based on their rent-paying ability on that site and that there is a hierarchy of sites based on differential productivities under the appropriate uses.

Market Forces and City Planning

It is the total effect of the competition for sites to minimize the aggregate of inconvenience and frictions, as evaluated in terms of the local value systems, and hence to maximize the efficiency of the conduct of those human affairs in the community which require movement. The processes of the urban land market tend to produce the most efficient urban pattern. It is needless to dwell on how imperfectly the market operates and how wide are the actual deviations from the perfect pattern of land uses. Nevertheless, a rational pattern is discernible in every community, and the processes of readjustment to new conditions are constantly in motion. And here lies the basic cause of the inefficiencies in land use arrangement—that there is a constant lag resulting from the dynamic nature of society, socially, economically, and technologically, which impinges upon the rigidity of the physical improvements; these improvements carry over far beyond the time when they adequately expressed the needs of the community.

The long physical life of the improvements to urban land creates a serious obstacle to the readjustments in land use to changing conditions.

¹² Snyder, Blake, and R. W. Roby, *Fundamentals in Real Estate* (New York: Harper & Brothers, 1927), p. 117; Niehuss, M. L., in an unpublished study of special assessment taxation in Detroit, Mich.; Ratcliff, *op. cit.*, cf. p. 15.

The replacement of an existing improvement is not justified until the value of the cleared land exceeds the present value of the original enterprise—land and building. If it were possible to forecast all social, economic, and technological changes with exactness, this problem would not be so serious. The original difficulty lies in the inability of men to look ahead and in the inescapable limitations of long-term forecasting. Another basic difficulty is in the inherent expensiveness of buildings. Even when it is possible to foresee a change within a few years in the nature of a given location, which would justify a type of land use that is not supportable on the site at the present, it is not often possible to construct a building for a use that is presently appropriate at a cost that is low enough to be retired during a short life. The one story "taxpayer" is an attempt to derive some revenue during the time when the site is ripening into a higher use without requiring a large investment in improvements.

The basic objective of city planning is to attain the same land use pattern that would emerge naturally from the processes of the urban real estate market under conditions of perfect competition. This statement assumes that the community, through local government agencies, competes in the market to provide for those public uses, such as schools and parks, for which the community is willing to pay. Since efficiency is a function of the local set of values and preferences, the most efficient urban pattern must accurately reflect community objectives. Thus the city planners should start by asking the question: "What kind of a community do the citizens want?"

In the perfect market, natural zoning would result; land uses of similar or complementary character would naturally group themselves with maximum benefit to the property owners and to the community. But the market is not perfect; hence the city planner, having determined on the most advantageous grouping of uses, must enforce this grouping through a zoning ordinance. Without such enforcement, the natural pattern will be greatly disturbed by the accidents of ownership, the poor judgment of owners, the fact that for some uses location is a matter of relative indifference, and the short-term advantage taken by a few individuals acting on self-interest, without regard to the community.

Another corollary of this theory of city growth and structure is that the perfect land market would produce a pattern of land uses in a community which would result in the minimum aggregate of land value for the entire community. The most convenient arrangement results in the lowest aggregate transportation costs; in terms of saving of transportation costs, the advantages of the more convenient sites are reduced. Good planning, by increasing accessibility and inducing greater fluidity of population, diminishes the scarcity value of choice locations and hence

reduces the rent that they can command. It follows, therefore, that the perfect city plan is that which creates the lowest total of land values, for this is a reflection of basic efficiency.

*Internal Arrangement of Land Uses*¹³

The land use pattern of any urban area is a reflection not of the immediate and current space requirements of the community, but rather of the cumulative needs over a period of years. It is not the same pattern as might be proposed if the land were all vacant and a new community of the same size and character were being planned. The fixity of the investment of land improvements has already been cited as responsible for the lag in adjusting the physical aspects of the community to new social and economic needs. Thus in most of the cities of the land, the skeleton of the street and utility systems is a relic of earlier times, and a majority of the buildings are representative of generations past. Cities that have grown slowly and steadily are more likely to be adjusted physically to present needs than areas where expansion and internal shifts have been explosive and sporadic.

Early land economists and human ecologists were inclined to describe the distribution of urban land uses in terms of concentric circles of relatively homogeneous utilization, with a core of financial and retail uses at the center. Outside of this core was to be found the wholesale and light manufacturing zone, interspersed and surrounded by the homes of the lowest income groups. This description places heavy manufacturing in the next zone, with a tendency to be grouped about the transportation facilities that lead to the outside world. The outer belts of residential land use serve progressively higher income groups as the distance from the center increases. It is apparent that there is a substantial basis of fact and theory to support this concentric-circle conception of urban agglomeration. But even with full recognition of the exceptions that are to be found in individual cities by reason of accident or topography, there are other generalizations of city structure, which in some cases tend to invalidate the circular conception and which, in any event, must be incorporated into any generalized description of urban land use structure. A separate examination of each of the major functional areas will pro-

¹³ This section and the following section on city growth owe a special debt to Homer Hoyt, who has been a leader in developing description and theory in the field of city growth and structure and who has summarized his work so effectively in the Federal Housing Administration publication, *The Structure and Growth of Residential Neighborhoods in American Cities* (Washington, D.C.: U.S. Government Printing Office, 1939), and in his earlier *One Hundred Years of Land Value in Chicago* (Chicago: University of Chicago Press, 1933).

vide a basis for a modification of some of the earlier concepts of city structure.

Retail Structure. With very few exceptions, the central retail shopping district is found at the very convergence of all transportation and traffic channels. This spot is the center of the city in terms of being most convenient to the greatest number of people, although it may not be the geographical center of the built-up area. It is the place associated with the highest land values, tall buildings, high-density land use, and the greatest concentrations of people during daylight hours. In only the larger cities is there a sufficient specialization of land use to result in a separation of the retail and financial districts. Where such is the case, the grouping of financial functions is found close to, but at one side of, the central shopping zone. A more detailed examination of the retail pattern is necessary, since a large share of the retail business in many cities is done outside of the central district. The focal point of every city is the central shopping area, familiarly termed the "100 per cent district." Here are the great department stores, the incarnadine variety chains, the smart apparel shops, interlarded with restaurants, drugstores, and specialty stores that serve the shopping crowds drawn into the district. This is the area that, by virtue of the ecological organization of the city and the convergence of transportation lines, is the spot most accessible to the greatest number of consumers. Crowding and interpenetrating the area of most intensive retail activity are the lesser retail uses—popular-price department stores, shops that sell men's wear, furniture, pianos, family shoes, sporting goods, and radios, and popular-price restaurants. In one sector there may be a scattering of theaters and at another point the financial and office building district. As the central business area merges into the wholesale and light-manufacturing district or into the slum and roominghouse area, there appear the lowest grade of central business uses—pawnshop, food store, pool hall and beer garden, burlesque house, automotive supply shop, shoe repairer, cheap photographer, and cheap restaurant. In the direction of the better residential areas, the retail area tapers off in specialty shops, food stores, restaurants, gift shops, small men's and women's apparel stores, and automobile showrooms.

It is a common misconception that the majority of retail trade is done in the central district. Two authoritative studies of retail trade, one covering Baltimore in 1929,¹⁴ and the other Philadelphia in 1935,¹⁵ reveal

¹⁴ Rolph, I. K., "The Location Structure of Retail Trade," *Domestic Commerce Series*, no. 80, U.S. Bureau of Foreign and Domestic Commerce.

¹⁵ U.S. Department of Commerce, *Intra-city Business Census Statistics for Philadelphia, Pennsylvania*, p. 25, Bureau of the Census, May, 1937, prepared under the supervision of Malcolm J. Proudfoot, Research Geographer.

the relative importance of the central area (see Table 63). In Baltimore, the central shopping district contained 6.1 per cent of the city's stores and accounted for 28.1 per cent of the total retail business. In Philadelphia, the corresponding ratios were 9.2 per cent and 37.4 per cent. In only two retail classifications did the central district account for more than 40 per cent of the city sales—the general-merchandise group, with 71.5 per cent, and the apparel group, with 63.2 per cent.

TABLE 63. PER CENT OF TOTAL STORES AND TOTAL SALES FALLING IN CENTRAL BUSINESS DISTRICT, PHILADELPHIA, 1935 *

Business group	Per cent of stores	Per cent of sales
All groups.. . . .	9.2	37.4
Food stores	2 5	5 7
Automotive group	5 0	9.5
Filling stations.	1.8	2 2
General-merchandise group.	4.9	71.5
Apparel group.	22.1	63 2
Furniture-household group . . .	18 0	34 9
Lumber-building-hardware group .	7.3	15.3
Restaurant group	14 6	37.4
Drugstores	5.7	25.2
Other retail stores...	17.6	37.0

* *Intra-city Business Census Statistics for Philadelphia, Pennsylvania.*

In three other groups, the central area accounted for roughly one-third of all sales—the furniture-household group, the restaurant group, and the unclassified group. Twenty-five per cent of all drugstore sales, 15 per cent of the sales of the lumber-building-hardware group, and less than 10 per cent for the food stores, automotive group, and filling stations were made in the central area.

The pattern of the outlying retail structure consists of combinations and variations of two basic conformations. The one phenomenon is the retail use of property abutting a traffic artery, stretching out along its length, and rarely sprouting off down intersecting streets. This form is variously called a "string-street development," a "business thoroughfare," or "business street." The nature of the uses comprising this conformation depends upon the extent to which the street is a main automobile artery and the degree to which it is the core of a residential area. The use of the street as a traffic artery attracts retail shops serv-

ing the transients—filling stations, accessory shops, automobile showrooms, quick lunches and refreshment stands, food markets, and fruit stands. The proximity of residential districts encourages convenience-type outlets—drugstores, grocery stores, laundry and cleaning branches, hardware stores, delicatessens, and pool halls. Since there are infinite variations in the relative importance of major streets as arteries and as the cores of residential districts, the nature of string-street retail development cannot be strictly defined.

The other basic conformation of the outlying retail structure is the nucleation, a clustering of retail uses, which in the higher forms tends to assume a structural unity. This form typically appears at the more important intersections and creates a pyramiding of land values to a peak adjacent to the intersection. The nucleation may vary in nature, extent, and intensity of land use from the neighborhood grocery-drug-store combination to a major retail subcenter providing on a reduced scale all the services of the central business district. Frequently, nucleations appear as peaks of development in a string street, and the boundary between the string street and the nucleation is a matter of arbitrary definition. In most cases, the nucleation is concentrated on the primary street, although it frequently sends off short spurs down the major cross street. The junction of two string-street developments is usually the locus of a nucleation. The numerous isolated grocery stores and drugstores that spot residential areas are of the same nature as the nucleations proper and often constitute the original germ that develops into a nucleation as the tributary residential area matures.

Attempts have been made to identify and define subclassifications of these two basic conformations, the string street and the nucleation, which are encountered in the outlying retail structure. Imperfect as these classifications are, they prove useful in providing a rough measure of the relative importance, in the retail trade of the city, of these areas as defined and in characterizing the services found there.

In his study of the retail trade of Philadelphia, Proudfoot identifies the more intensively developed nucleations as "outlying business centers."¹⁶

. . . Here, for the most part, are found shopping-goods outlets such as women's and men's clothing stores, furniture stores, shoe stores, jewelry stores, one or more large department stores, and an admixture of convenience-goods stores. Although individual outlying business centers do not draw customers from all parts of the city, they frequently attract them from long distances. Since these centers depend on customers drawn from wide areas, they all have developed

¹⁶ *Ibid.*, p. 3.

at focal points of intracity transportation where pedestrian traffic is increased by passengers of mass and vehicular conveyance.

The lower grade nucleations are termed "isolated store clusters."¹⁷

. . . These clusters usually comprise two or more complementary rather than competitive convenience-goods stores. Thus there may be a drugstore, a grocery store, a meat market, a fruit and vegetable store, a delicatessen, and possibly a small lunchroom grouped together at a minor street intersection. These stores usually supply a large portion of the immediate convenience-goods wants of residential families located within an easy walking distance. Frequently these store clusters develop in sparsely settled fringes of the urban area, but in many instances they are found within densely populated residential areas, restricted, by the chance of occupancy or by zoning regulations, to a scant block or even a city lot.

String-street developments are divided into "principal business thoroughfares," and "neighborhood business streets." With respect to these two classifications,¹⁸

. . . It is both a business street and a traffic artery. As a business street it possesses large, widely spaced shopping and convenience-goods stores. As a traffic artery it carries a heavy density of mass and vehicular traffic. This dense traffic primarily results from attractive forces exerted on residential population by the central business district or by some outlying business center. Although stores of this structural type cater to, and are primarily dependent on, customers derived from this dense traffic, their presence has little counter effect on the density of this traffic. Offering the special inducement of ample curbside parking space, these stores manage to thrive by attracting customers from a small fraction of the passengers of this intercommunity traffic.

The neighborhood business street is primarily of neighborhood significance. It draws customers, almost without exception, from within easy walking distances. This structural type consists of more or less continuous rows of grocery stores, meat markets, fruit and vegetable stores, drugstores, and other convenience-goods outlets, interrupted by a minor admixture of shopping-goods stores. These streets extend throughout the residential portions of the city. They either take the form of a more or less regular network following the principal mass transportation and trucking routes, which are undesirable for residential purposes, are extensions to outlying business centers, or are isolated from other retail structures.

In the statistical analysis of retail sales for Philadelphia, the data for outlying stores were grouped into three classifications—outlying business centers, principal business thoroughfares, and community business areas,

¹⁷ *Ibid.*, p. 4.

¹⁸ *Ibid.*, p. 4.

which include isolated store clusters, neighborhood business streets, and single isolated retail stores.

Table 64 shows, for each of the types of retail business, what percentages of the total for the city were accounted for in outlying business centers.

TABLE 64. PER CENT OF TOTAL STORES AND TOTAL SALES FALLING IN OUTLYING BUSINESS CENTERS, PHILADELPHIA, 1935 *

Business group	Per cent of stores	Per cent of sales
All groups... ..	18.6	19.2
Food stores.....	13.3	22.0
Automotive group. . .	17.5	34.8
Filling stations... ..	8.1	10.8
General-merchandise group.	28.5	6.7
Apparel group... ..	39.2	26.9
Furniture-household group..	35.7	38.6
Lumber-building-hardware group. . .	21.6	20.9
Restaurant group..	15.5	19.4
Drugstores.. . . .	14.1	20.8
Other retail stores	19.6	19.3

* *Intra-city Business Census Statistics for Philadelphia, Pennsylvania.*

More than one-third of the city's purchases in the automotive and furniture-household groups are made in outlying business centers. With the exceptions of the filling-station and general-merchandise groups, which run lower, there is a high degree of consistency in the percentages for the other groups, ranging from 19 per cent to 27 per cent, with a clustering around 20 per cent.

An examination of the character of trade in the individual centers points to a marked diversity.¹⁹

. . . For example, there are: four centers with over 50 per cent of their individual business derived from sales in the food group . . . ; three other centers have from 50 to 70 per cent of their sales volume accounted for by the automotive group . . . ; three centers derived a substantial proportion of their business from sales in the general merchandise group . . . or in the apparel group . . . ; several other centers are as well represented in the furniture group . . . ; and restaurants are outstandingly represented in five centers. In

¹⁹ *Ibid.*, p. 11.

contrast, there is little concentration in the case of any individual center in such enterprise as filling stations and drug stores; and one-third of the centers, those not listed above, show little deviation from the average condition.

These facts suggest that there is a diversity in the character of the tributary areas supporting these nucleations and emphasizes the difficulties in constructing an adequate qualitative classification of retail groupings.

The principal business thoroughfares of Philadelphia are generally dominated by either the food or the automotive groups.²⁰

. . . six thoroughfares are outstandingly dominated by stores of the food group . . . ; and four are dominated by automotive establishments. . . . The dominance of these two kinds of business, as shown by the sales volume of these thoroughfares, amounts to from 50 to 80 per cent of their totals. Finally, in this connection, it is to be recalled that 67 per cent of the total sales recorded for all of these thoroughfares is derived from these two business groups. These conditions are the apparent outgrowth of heavy automobile traffic passing these establishments, which, with their wide spacing, offer ample parking space for vehicles, the passengers of which either make convenience-goods food purchases or buy automobiles and auto accessories.

TABLE 65. PER CENT OF TOTAL STORES AND TOTAL SALES FALLING IN PRINCIPAL BUSINESS THOROUGHFARES, PHILADELPHIA, 1935 *

Business group	Per cent of stores	Per cent of sales
All groups....	2.8	3.3
Food stores ...	2.3	3.0
Automotive group	7.0	20.3
Filling stations..	4.7	8.5
General-merchandise group .	3.1	0.1
Apparel group.....	1.9	0.5
Furniture-household group. .	3.7	4.4
Lumber-building-hardware group..	4.2	4.0
Restaurant.....	2.8	2.2
Drugstores..	3.0	3.0
Other retail stores..	2.3	2.2

* *Intra-city Business Census Statistics for Philadelphia, Pennsylvania.*

²⁰ *Ibid*, p. 11.

This explanation fails to recognize the effect upon retail trade of residential districts adjacent to string-street developments. The predominance of food sales in some of these thoroughfares cannot be explained without considering the extent of residential development near by.

The relative importance of the business thoroughfare in the various lines of trade for the city as a whole is shown in Table 65. It is apparent that, as defined by Proudfoot, the principal business thoroughfares of Philadelphia play a minor role in the retail distribution of the city, except in the automotive and filling-station groups.

The community business areas of Philadelphia are the most important of the four general classifications of retail areas, containing 69.4 per cent of all stores and doing 40.1 per cent of all retail trade. According to Proudfoot, the outstanding characteristic of these areas is—²¹

. . . the rather uniformly high proportion of business conducted by stores of the food group. From a high average of over 42 per cent of the combined volume of sales recorded for food stores, it is notable that for fifteen areas over 40 per cent of their business is of this kind. In only two cases does this proportion fall below 25 per cent . . . , and in two other cases nearly 60 per cent of the volume of sales is of this kind . . . Outside of this primary dominance of food stores in most community business areas, there is a secondary concentration in three areas of sales in the automotive group . . . , and one area in which the general merchandise group accounts for over 83 per cent of the combined volume of sales. . . . Therefore, the retail trade of these community business areas, with minor exceptions, seems to fit the general description given for neighborhood business streets and isolated store clusters.

Table 66 reveals the relative importance of community business areas in the trade of the city.

Among the other attempts at classification of outlying retail conformations are those of I. K. Rolph in a study of Baltimore and of the author in a study of Detroit.²²

The Rolph classification recognizes neighborhood developments, string-street developments, isolated units, and subcenters. Subcenters are grouped into four classes.

The . . . extent to which they contain outlets representing commodities necessary to make a community self-contained from a merchandising view point is the basis of the following designations:

²¹ *Ibid.*, p. 12.

²² Rolph, *op. cit.* Ratcliff, R. U., "An Examination into Some Characteristics of Outlying Retail Nucleations in Detroit, Michigan," doctoral dissertation (University of Michigan: 1935).

Class A subcenter contains minimum requisites in all of nine groups of merchandise.

Class B subcenter contains minimum requisites in any seven groups of merchandise.

Class C subcenter contains minimum requisites in any six groups of merchandise.

Class D subcenter contains minimum requisites in any five groups of merchandise.

TABLE 66. PER CENT OF TOTAL STORES AND TOTAL SALES FALLING IN COMMUNITY BUSINESS AREAS, PHILADELPHIA, 1935 *

Business group	Per cent of stores	Per cent of sales
All groups....	69.4	40.1
Food stores	81.9	69.3
Automotive group ...	70.5	35.4
Filling stations ..	85.4	78.5
General-merchandise group...	63.5	21.7
Apparel group..	36.8	9.4
Furniture-household group..	42.6	22.1
Lumber-building-hardware group ..	66.9	59.8
Restaurant..	67.1	41.0
Drugstores	77.2	51.0
Other retail stores..	60.5	41.5

* *Intra-city Business Census Statistics for Philadelphia, Pennsylvania.*

The nine commodity groups are similar to those previously cited from the Proudfoot analysis of Philadelphia, with the addition of a jewelry group and the omission of filling stations and the miscellaneous group: food, general merchandise, apparel, automotive, furniture and household, lumber and building, restaurant and eating places, drugs, and jewelry.

In the study of outlying retail structure in Detroit, subcenters were classified on the basis of the presence of high-class retail uses, retail uses having been classified according to relative rent-paying ability.

Regardless of the usefulness of extended subclassification of retail conformation, it does appear that there are two basic forms—the nucleation (which describes the central business district as well as outlying clusters) and the string street. The essential difference between the two is the lack of internal organization in the case of the string street

as compared with the more definite pattern in arrangement of uses that characterizes the nucleation.²³

Wholesale and Industrial Areas. The wholesale and light-manufacturing zone is not found on all sides of the central retail district, as implied by the concentric zone conception of the city. Rather, the wholesale area tends to locate on one side of the central retail district, in a location convenient to transportation facilities. This area may contain some of the older residential structures, not yet converted to business use. The area is characterized by the predominance of loft buildings, which are suitable for both the storage requirements of the wholesale function and the operations of light-manufacturing establishments such as those engaged in printing, photoengraving, jewelry manufacture, and women's garment or men's wear production.

The amount of the land area of a community that is devoted to industrial uses varies widely in accordance with the character of the area. Cities that are founded on recreational or political activities may have but a small percentage of land area used in production, mainly for local consumption. On the other hand, major manufacturing centers such as Detroit, Chicago, and Cincinnati have as much as 16 per cent of the privately developed area in industrial use. The forces that led to a concentration of industry at the center of the cities in their early stages of development have shifted until manufacturing is no longer a typically central-area use. This type of activity is now associated with the routes of transportation, notably railroads and waterfronts. Industrial plants string out along railroad lines, rivers, and lake and ocean fronts in long bands. Occasionally this pattern is broken by a concentration of industry in a special industrial district, which has been provided with connections to the major transport routes. Belt lines that connect with the trunk lines also attract industrial use. Recent industrial growth has been found in large part on the outskirts of cities where land is cheaper, taxes lower, congestion less, and plenty of space available for modern one-story plants and for employee parking.

Residential Areas. Residential land use accounts for the major area of all cities. In one study of 16 cities, 80 per cent of the privately developed land was used for this purpose.²⁴ In these cities, all under 300,000 in population, single-family homes absorbed 74.2 per cent of the privately developed land, two-family structures occupied 4.28 per cent,

²³ The discussion of the retail structure is adapted from Ratcliff, *The Problem of Retail Site Selection*.

²⁴ Bartholomew, Harland, *Urban Land Uses*, Harvard City Planning Studies, vol. IV (Cambridge, Mass.: Harvard University Press, 1932).

and multifamily structures took up 2.23 per cent. The 1940 U.S. Housing Census provides a rough measure of the relative importance of different residential types in the land use structure of urban areas. Eighty per cent of all nonfarm residential structures were single family, 11 per cent two family, 3 per cent three and four family, and 2 per cent five or more family.²⁵ As we shall see, in the urban land use structure, there is a strong tendency for residential structures of similar type to be found in groupings. There are wide differences in the proportioning of residential structure types among the cities, with a tendency for the larger cities to have a larger proportion of the multifamily structures. In the metropolitan areas, there is a tendency for the proportion of multifamily structures to diminish with the distance from the center of the city.

In an attempt to break down the residential areas for more refined structural analysis, there are many physical, social, and economic characteristics which form individual geographical patterns and which might be used as a basis for delineating residential subareas. In the following paragraphs, the basis of differentiation is the level of residential rents and values, with the term "rent" used as a general term to indicate the qualitative differences in housing. It has been found that there is a good correlation between the level of rents and values and the level of family incomes as well as the quality of the housing.

The pattern of rental areas that has been found typical of most American cities is not in the configuration of concentric circles or in sharply defined rectangular districts. There are seldom any distinct dividing lines between districts of different rent levels, but rather there are transitional zones, which partake of the nature of both adjoining areas. There is characteristically found in every community one or more clusters of blocks where the level of rents is the highest in the city. From these poles of high rent and high housing quality, there is a grading down through successively lower rent levels until the meanest housing and the lowest rents are reached. In smaller cities, the high-rent area may be located near the center of the city, but in the larger and more dynamic communities it may be found at the periphery. Often there is more than one high-rent district. Sometimes the high-rent area may take the form of a wedge or a ridge, extending outward from the center to the very edge of development.

Immediately surrounding the high-rent areas or sectors, which are necessarily small in extent, are the zones of intermediate housing. In

²⁵ One- to four-family structures with business uses combined constituted 3 per cent of all residential structures; miscellaneous types were less than 1 per cent.

some cases, there will be additional intermediate-rent areas at the periphery of the city at a point removed from any high-rent district.

The low-rent areas of the community usually may be found both at the center and at the edge of the developed area, often in the form of a wedge spreading out from the center to the edge. The traditional association of the lowest rent districts and the central portions of the community is too limited a view. The crowded slums of the older, central districts have their counterparts in the shack towns of the outlying districts. It can be demonstrated that, although the centers of cities have low-rent areas, there is no general upward gradation of rent levels toward *all* parts of the periphery; low-rent areas may form districts extending through the center from one edge to the other; they may take up a half or more of the city's area unbroken by higher rent districts. In short, a description of the residential districts in terms of wedges or sectors is more realistic than the older, concentric-circle approach²⁶

A recent ecological study of natural areas in a Midwestern city has developed a hypothesis that has much merit.²⁷ It was ascertained that, in this community, the pattern of housing characteristics that were related to economic status, such as rent and value of property, fell naturally into a sector configuration. On the other hand, the characteristics that related to age of structure and the place in the neighborhood cycle followed a concentric pattern. The natural areas, *i.e.*, areas of greatest homogeneity, were best determined by the overlapping of the two patterns.

City Growth

The forces of change are never idle in our urban areas. The city is a dynamic thing, growing and shifting in great spurts during periods of rapid expansion and building boom, but never quiescent even when growth has stopped and decline sets in. The city is constantly changing in a variety of ways that have economic significance. Some of these changes take place with the passage of time with little reference to the positive acts of man. The structures and works that make up the physical form of the community are subject to wear and deterioration, and, in response to sociological and technological change, they become less well adapted to the highest performance of essential functions and thus grow progressively obsolete. Furthermore, changes are taking place in the characteristics of the inhabitants, for time brings inevitable

²⁶ The sector theory is set forth by Hoyt, *op. cit.*

²⁷ Unpublished doctoral dissertation by John Winfred Teter, University of Wisconsin.

and progressive changes in family composition and age distribution. But the most substantial changes are the concomitants of growth. Growth is accompanied by the lateral expansion of the urban areas as new districts are developed; there is also growth in the form of filling in the vacant lots in areas that are already partially built up; and finally, there may be vertical growth as multistory structures replace the original buildings. Growth brings with it a stirring about within the physical structure of the city. There are shifts in the places of residence of families and groups; the need for additional commercial and community facilities results in the succession of new buildings as new uses replace the old, and the basic internal land use structure of the community is disturbed and readjusted.

Lateral Expansion. The spread of the built-up area of the community may take one of several forms; and the form of the expansion is related to transportation facilities. There has always been a marked tendency to develop new residential areas along the lines of fastest transportation to the center of the city. This axial growth occurs along lines of public transport such as the suburban railways in large metropolitan areas, and along major arterial highways, which form the routes of bus lines, streetcar lines, and commuting by private automobile. In addition to the axial extension of the built-up areas, there may develop isolated settlements well outside of the main body of the city but tied to the major highways or suburban railway service. Very often these outlying settlements are dormitory towns for the well-to-do, whose economic and cultural life is focused in the city. As growth continues, these isolated nuclei, originated at separate points along the lines of communication, may expand and eventually coalesce into a continuous band of settlement.

The natural limit to the extension of settled areas along radial lines is set by the competition of areas that are closer to the center and, though not so well served by rapid transport facilities, can compete in time-distance to the center because of the lesser mileage-distance. Thus central growth takes place in the form of the accretal extension of the main body of the city and the filling in of the interstices between the lines of axial growth. Modern forms of transportation have facilitated both the outward axial extension of the city and the interstitial growth. The private automobile has permitted people greater flexibility in choice of a living place; and, while it remains advantageous to be close to major trunk highways leading into the city, it entails no great inconvenience to be somewhat removed from them. This flexibility opens up vast areas at the outskirts of cities lying between the major radial

routes. The flexibility in the routing of buses has also tended to fill in the areas between the axial tentacles of the city. Bus routes can swing off the main arterials to serve inlying residential districts. Cross-town streetcar and bus routes serve as feeders for the radial lines of transport as well as means of access to outlying centers of industrial employment, retail districts, and recreational facilities without having to go into the center of the city and out again. The flexibility of the automobile and the bus has contributed to the greater diffusion of residential, commercial, and industrial facilities and has reduced the advantage of the central business district over outlying subcenters.

Internal Shifts. During periods of growth there is a continual shifting of the land use structure as adjustment takes place to the new needs of the community for the services of land. For the most part, expansion involving the initial improvement of vacant land is restricted to residential and industrial use and, in some cases, to outlying retail developments. Other ecological shifts involve a succession of uses, the altering of existing structures for new uses, or the demolition and replacement of existing buildings. Succession can also occur in the occupancy of residential areas, where a new group replaces one of different social characteristics. Sometimes succession does not involve a distinct change in use, but rather an increase in the intensity of the same use, as in the replacement of a small office building with a skyscraper or the substitution of a new building for department-store occupancy as a replacement for several small retail-store buildings.

As cities grow in population and expanse, there is an increasing demand for land for commercial and recreational use, for public buildings and churches, and for transportation and public utilities. The central-area retail and financial uses expand and push outward against the surrounding ring of the less intensive wholesale, light manufacturing, and residential uses. In turn, these uses are disturbed and at the same time may be growing in land requirements; thus they push outward or break out into new patterns at points in the city structure where they can outbid other uses.

There are a number of factors that in recent years have tended to diminish the need for central-area commercial and industrial land in relationship to the population of the community. The steel-frame skyscraper and the elevator have led to vertical expansion and thus have reduced the need for additional ground area. However, there are limits to this trend, for the concentration of multistory buildings leads to such congestion of persons and traffic that much of the advantage may be offset if the concentration becomes too great.

Another significant development is the growth in the importance of

outlying retail centers and the diminished relative importance of the central shopping district. This change is accounted for in part by the decline in the relative advantage of the central area in convenience. Not only have the automobile and the bus improved the relative position of the outlying retail subcenters in terms of time and money costs of transportation from the homes of the customers, but the congestion of the central area has created delays and frictions that drive customers away. Another factor is the decline in population at the center of the city, most convenient to the central shopping district, and the growth in population at the periphery, most convenient to the outlying districts.

Among other changes that have affected the central area is the shift in the wholesaling function, which has reduced the need for land for this operation. Central industrial uses are now less important because of the movement of industry to the outlying areas along main lines of transport. New central residential development has been restricted to relatively small areas covered with high-class apartment hotels and a few public-housing projects for families of low income. For the most part, new residential developments are found at some distance from the confusion and congestion of the central area. In many cities, the central area is partly surrounded by a ring of blight, a transitional zone characterized by slum living conditions, physical deterioration, and a mixture of land uses. This is a zone in which the replacement of existing uses is not economically justified or where succession is unjustifiably delayed by the poor judgment of property owners who overvalue the prospects of their properties and hold out for unwarranted prices. In many cities, the blighted area is the product of that combination of factors which have checked the expansion of the central business district; the blighted area can only move in one direction—down—until the owners are willing to accept prices for their land that can be justified by the uses appropriate to the location.

Movement of Residential Areas. In discussing the urban residential structure it was pointed out that the most important segment was the high-rent area. It can be demonstrated that the growth of the entire city, particularly the development of residential districts, is influenced by the movement of this residential pole. As new homes for the families at the top of the economic and social scale are built at the edge of the existing high-rent district, intermediate and lower income group families move into the homes that are given up at the opposite side of the district. New homes for the intermediate groups tend to be found close to the new homes of the upper group, and new homes at lower levels are pushed into less desirable areas. Since the existing high-rent areas are

usually between intermediate areas that crowd close on either side, they can only expand outward, and hence new high-rent districts are usually found at the outskirts of the community. For the most part, the members of the upper crust do not move into the dwellings abandoned by other members of the same group, particularly since the rate of obsolescence is very high in this type of home. Thus the needs for expanded housing space for this group, and the shiftings that are prompted by the desire to keep up to date, must be met by new construction on vacant land at the edge of existing development and as an extension of the built-up high-rent area. The few exceptions to this general rule are found in our largest cities, where costly and luxurious housing can be found in tall apartment buildings built in fashionable groupings close by the central business district on land reclaimed from commercial or slum use.

Because of the strategic position of the high-rent areas in the urban structure, it is important to understand the general principles that appear to guide their movements. The origins of these areas in urban history seem to have been in juxtaposition to the central retail and office centers. The principles which reflect their growth characteristics have been stated by Homer Hoyt as follows:²⁸

1. High-grade residential growth tends to proceed from the given point of origin, along established lines of travel or toward another existing nucleus of buildings or trading centers.

2. The zone of high-rent areas tends to progress toward high ground which is free from the risk of floods and to spread along lake, bay, river, and ocean fronts, where such waterfronts are not used for industry.

3. High-rent residential districts tend to grow toward the section of the city which has free, open country beyond the edges and away from "dead end" sections which are limited by natural or artificial barriers to expansion.

4. The higher priced residential neighborhood tends to grow toward the homes of the leaders of the community.

5. Trends of movement of office buildings, banks, and stores pull the higher priced residential neighborhoods in the same general direction.

6. High-grade residential areas tend to develop along the fastest existing transportation lines.

7. The growth of high-rent neighborhoods continues in the same direction for a long period of time.

8. De luxe high-rent apartment areas tend to be established near the business center in old residential areas.

9. Real estate promoters may bend the direction of high-grade residential growth.

²⁸ Hoyt, *op. cit.*, p. 117.

Historically, high-rent areas developed in axial formation along the fashionable avenues and boulevards that led to the center of the city. But with the advent of the automobile, these streets became noisome and undesirable, and the well-to-do began to seek seclusion among their own kind. Thus the new developments for them took the form of fashionable subdivisions, still clinging to the original sector but at one side, laid out in wide, curving streets and beautified with trees and shrubs. The areas with the most attractive terrain or the finest views were pre-empted by the wealthy. Where centrally located high-rent apartment districts developed, this type of use outbid and replaced the existing central uses.

New construction for the intermediate families tends to cling to the high-rent districts. There is some filtering up into highest priced homes as they are abandoned by their original owners, but where they are large and expensive to operate, few families can afford to live in them and those families who can generally prefer to build modern, efficient dwellings. As a result, the large mansions of the rich often are converted into institutions or cut up into small apartments for families of modest income. In some cases, the rich have been immediately succeeded by low-income families.

Low-rent areas tend to move outward from the center of the city in sectors or bands, by the process of succession, with new low-rent areas developing as shack settlements at the edge of the city. There are movements of cultural groups within the low-rent areas as new immigrants crowd into the community, usually occupying the lowest grade of housing, and as the older immigrants, becoming established and more stable financially, are able to move into slightly better accommodations.

The underlying movement within the urban structure is outward in direction. Strong forces, many of them moving with the passage of time, operate to diminish the utility and desirability of built-up areas relative to new areas, but, with few exceptions, the difference is not sufficient to bring about a replacement of the old with the new in the location of the old. Neighborhoods of new homes pass through a predictable cycle as the structures deteriorate and become obsolete and as the original families grow and decline. The houses become less attractive with age, costs of upkeep rise, and repairs are neglected. The predominance of home ownership declines as families move away or are dissolved and as foreclosure is followed by tenancy. Inharmonious groups may invade the neighborhood as the resistance to change diminishes. Values fall, and structures are converted to small apartments or to commercial uses. As the neighborhoods deteriorate, they are unattractive to young families, whose housing needs are typically satisfied by new dwellings, and the

areas are abandoned to lower income groups. The outward tendency has resulted in some cities in the decline in population of the central blighted districts. Contrary to some opinions, there is evidence that the outward push of families takes the form of movements outward by stages or degrees rather than a jumping from the center to the periphery in one movement.²⁹

Economics of Succession

Since internal shifts in city structure generally involve the succession of land uses, it will be well to understand the economics of this fundamental process. When vacant land is involved, or when a change in use requires no replacement or major alteration of an existing structure, the use change occurs when some new use outbids the existing use for the property. In effect, the same market process is involved when succession requires the replacement of an existing structure. Such replacement takes place when the return on the site after the removal of the original structure and its replacement for the new use is greater than the return on the entire property, land and building, under the original use. In other terms, the replacement is economically justified when the value of the cleared land (ready for the new use) exceeds the remaining value of the original property, land and building.

In Chap. 12 we considered the process by which the owner of a parcel of real estate calculates how he may secure the maximum return from his holding. Chart 7 (page 357) is based on the assumption that the use of a vacant lot is contemplated; the chart illustrates the forecasts of revenues and expenses and the distribution of net revenue that must be estimated for each of a number of alternative uses in order to determine which one will yield the largest site rent. In the case of improved rather than vacant property, the procedure is the same, with the continuation of the existing use as one of the alternatives. Thus, the owner of a going real estate enterprise is constantly alert to the possibility that some new use for his land may yield a greater return than the continued operation of the present use.

To illustrate the situation when a change in use is economically justified, let us assume that Chart 7, repeated here in solid lines in Chart 8, exhibits the actual experience, past and prospective, as of any point of time during operation of an income property such as an apartment house. To simplify the explanation, the lowest segment of Chart 7, below *CY*, which represents operating expenses, is omitted; thus Chart 8 now represents net revenue after deducting operating expenses. The dotted lines

²⁹ Richard S. Dewey, unpublished dissertation, University of Wisconsin, 1947.

superimposed on the solid lines represent the estimated operating experience for a redevelopment of the property as of year N' . It might be assumed that in year N' there has occurred certain environmental changes, such as an improvement in transportation facilities, which would make appropriate a new use for the land and would yield a new pattern of revenues represented by curve $A'Z'$ and annual site rent measured by $B'N'$.

The question that confronts the owner is whether to redevelop the

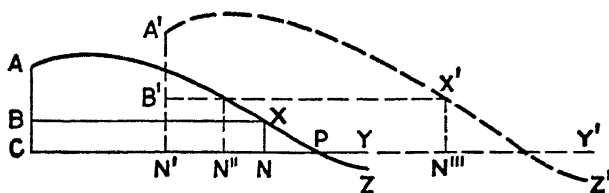


CHART 8.

site, and his decision will be based on his judgment of the comparison between his return from the time of redevelopment forward and the return from the continued operation of the existing or present use. Note that he looks only forward; his past commitments of capital, his former expectations of revenues, and his original plan for the allocation of revenues are matters of no consequence; he must determine how to maximize his net rent from now on. In the example, it is evident that, beginning at year N' and until year N'' , the redevelopment of the site would yield fewer dollars after providing for depreciation (the area

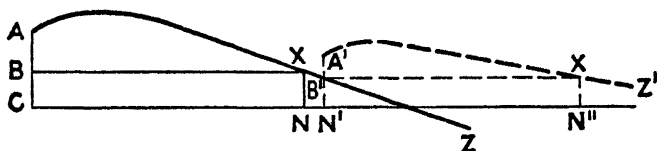


CHART 9.

above line $B'X'$) than the net return (AZ) under the present use. The owner will therefore find it advantageous to continue with the present use up to year N'' ; from that time the net site rent under the new use will be greater than the net revenue for the present use.

This example illustrates two fundamental principles: that a change in the character of a neighborhood so that a more intensive use is justified has the effect of shortening the economic life of the original use; that the economic life of a development is terminated when the net revenue that it

is producing falls below the site rent that could be produced under a new use.

Chart 9 illustrates a situation wherein the environmental conditions shift in such a manner that the potential reuse of the land will produce a lower site rent than that calculated for the original use. Here, again, redevelopment is justified at the time when the net revenue of the present use drops below the site rent under the new use. The effect in this example is to extend economic life beyond the time originally calculated.

The charts have been used primarily to demonstrate the essential relationships in land use succession and to show how succession normally takes place only when the net revenue of the existing project has declined below the site rent that could be produced by an alternative use. It should be clear, therefore, that, to control or accelerate the process of succession, it is necessary to influence this basic relationship either by modifying one of the variables or by using subsidy to bridge the gap between present value and redeveloped value.

CHAPTER 14

URBAN LAND POLICIES

Nature of Social Control

In this volume, the approach to an understanding of urban land utilization has given primary emphasis to the underlying processes of the urban land market. In large degree, the explanations have been in terms of the concepts of classical economics. But there has also been a consistent recognition of the fact that the actions and reactions of the market are restricted, modified, and distorted by the presence of a dynamic and ever-changing framework of social, economic, and legal institutions. It is these institutions which are the basis of private property in land and which, when expressed in the law, are the definition of private property. But there are complex changes that are constantly occurring in the functions of the urban mechanism, in technology, and in the value systems of individuals and groups so that the institutional framework is continually adapting itself to new conditions. When such readjustment is the result of considered and overt social action, usually through government, and when there is specific expression through law or regulation, we say that land policy has been established. Urban land policies, then, are established objectives of the community with respect to land use, together with the implementation of law and regulation designed to attain such objectives.

It is an accepted principle that the ownership of land is exclusive but not absolute; each owner may use his own property to the exclusion of all others, but he must use it with due respect to the limitations imposed by society. In a sense, the group, or community, has certain rights in each parcel of land ownership that must be respected in its utilization. Thus individual decisions of owners and investors are not completely free. The extent and nature of the interest of the community in each unit of ownership are ever changing in accordance with the evolving needs of society.

If the urban land market were perfect in the classical sense, the interests of both individuals and society would be served through unrestricted business decisions of owners with respect to land use. But we have already discussed the imperfections of the market and so are aware that we cannot place full dependence on the natural forces in the market to produce a land pattern that is continuously adjusted to the needs of the community. It is a peculiar deficiency of the land market that we freeze land in one use for long periods through the installation of semi-permanent physical improvements. Thus, in the face of a shifting society and evolving technology, there stands a rigid physical complex of buildings with the streets and utilities that serve them; the result is continuous obsolescence of the city structure. The basic problem arises from the dedicating of land to currently appropriate uses through the erection of buildings and the provision of necessary facilities in face of the inevitability that the land improvements will become functionally obsolescent while still physically sound.

Such conflicts as arise between public and individual interests in land use are in some cases the products of unwise business decisions, but more often these conflicts arise because the individual viewpoint is not community-wide nor sufficiently long term.¹ Thus land may be exploited by overintensive development, which leads to congestion and overcrowding, to slums and blight. Subdivisions may be inappropriately located or the land misused by poor planning—small lots, inadequate public areas, or street systems unrelated to the street pattern of the central city. Where land developers and builders seek a quick profit rather than a long-term investment return, their interests may run counter to the social good. In such cases, the original exploitive profit to the developer-owner will be more than offset by detriments to future owners. From a long-term investment viewpoint, the interests of the property owners and the community are not often antagonistic.

It is probable that one of the explanations of antisocial exploitations or misuse of land is found in the uncertainties of long-term investment in real estate. As a result of these uncertainties, entrepreneurs find it the wiser course to unload rather than to hold land developments. In the planning of the developments, therefore, it is profitable to adjust to current market conditions to assure prompt disposal of the product. Land development is thus more in the nature of a manufacturing process than long-term investment. And because the manufacturers are small operators for the most part, who handle but one or two operations,

¹ Fisher, Ernest M., *Advanced Principles of Real Estate Practice* (New York: The Macmillan Company, 1930), pp. 307-308.

there is little incentive to act in the interest of building up good will on the part of customers or community.

In general, social control over land use reduces the uncertainties of investment in real estate. To the extent that controls are effective, it is possible to forecast *how* land is to be used, though not *how much* and *when*. Controls that assist in prediction may be said to be favorable to the investor and unfavorable for the speculator who preys on uncertainties. With the greater certainty and predictability that controls make possible, a longer term view will be encouraged and sounder and more socially desirable land developments will result.

The crystallization of urban land policies and the development of land controls have represented the efforts of society to offset the imperfections of the market and to direct the use of land more nearly in the interests of the community as a whole. Land use, in the broad sense of the term, is controlled at many points.

1. Control of subdividing and subdivision design. This subject was considered in an earlier chapter.
2. Restrictions on the nature of land use in conformity with a general land use plan for the community.
3. Limitations on the exterior dimensions of structures in relation to the land area and dimensions—building height, placement on the lot, and extent of land coverage.
4. Establishment of minimum structural standards of strength, fire resistance, light, ventilation, and sanitary facilities.
5. Restrictions on occupancy in terms of persons or families.

The controls that have been listed are generally restrictive in nature; they place limits on *how* land may be used. There are a few instances of public policy to encourage certain types of land use. Tax policy, as will be indicated later, can stimulate building or encourage home ownership. Other forms of governmental intervention that may be classified as social controls are public housing, urban redevelopment, and the acquisition of land for any public purpose through the exercise of the power of eminent domain.

City Planning

Our cities have been fashioned by accretion at the edges and through continual internal adaptations in land use. This growth has been piecemeal, the product of myriad loosely related business decisions on land utilization. It is surprising, therefore, that our cities are as well organized as they are and that there has evolved through the operation of market forces a complex of space relationships that serves reasonably

well in the conduct of production, exchange, and consumption. But as the functions of the urban organism become more complex and as the impact of social and technical change continues to mount, there is an increasing need for a master land use design that expresses the present needs of the community and anticipates future needs so far as possible. It is the original preparation of such a master plan and the continuing adjustment of it to fit changing conditions that is the essence of city planning as practiced in American communities.

The master plan is the design for the urban mechanism. It should reflect as far as possible the democratically determined objectives of the citizenry with respect to the kind of a community in which they wish to work and live. For example, the community may wish to discourage further industrial development, or there may be great local pride in the historical or cultural traditions of the area and a desire to memorialize them. If the population is young and vigorous, there may be special pressures for an extensive park and recreational system. Thus community sentiment can be reflected in the planning decisions with respect to the proportioning and arrangement of land uses, but basically the plan must be an expression of underlying social and economic forces over which the community can have little control.² At most, these underlying forces can be moderately dampened or modified, for these are the forces which created and nurtured the community, which are the reasons for its existence and its growth, and which have been the basis on which the urban structure has evolved. No master plan can override these forces; to the contrary, the plan must be founded on an understanding and interpretation of them.

The theoretical basis of city planning has been expressed in the following progression of propositions.³

1. The city is an economic and social mechanism. The explanation of the urban organization of society is found in the socioeconomic activities of man, which require the concentration of people, buildings, and machines within relatively small areas. Thus the demand for urban land arises from the need for space for the performance of these activities. The economic, social, and technical forces that impinge upon each urban area determine its economic and social characteristics and its rate of growth. In a sense, cities have developed as integral parts of the national productive and distributive machinery. The spatial pattern of functional areas within the city, the street system, the buildings

² Dorau, H. B., and A. G. Hinman, *Urban Land Economics* (New York: The Macmillan Company, 1928), p. 251.

³ Adapted from Ratcliff, R. U., "A Land Economist Looks at City Planning," *Journal of Land and Public Utility Economics*, May, 1944.

that crowd the landscape, together with the people who inhabit and use them, constitute essential items of economic equipment.

From the sociological viewpoint, cities are settlements of individuals living together in complicated economic and social contact. The social characteristics and value systems of city dwellers and their way of living condition the demand for the services of urban land and have a direct influence on the pattern of land use, on land value, tenure, and the type and design of buildings. To understand these influences we must know something of urban population trends, of age and sex distribution, of racial background, of geographical origins. We must know something of social changes that may alter urban behavior patterns and affect the demand for the services of land.

2. The physical form and ecology of the city are the products of the forces of demand and supply operating within the framework of the real estate market and conditioned by economic, social, and legal institutions. The pattern of land use in urban areas is not a matter of accident. There is an essential order in the urban structure. It is true that our cities have not had the benefit of the same skilled planning that has produced highly efficient machines and factories. But, while this lack of control and absence of conscious design have given rise to many inefficiencies in the operation of cities as part of the productive and distributive machinery, it remains that the basic urban form is essentially functional. It can be demonstrated that the spatial distribution of the various land uses has evolved from the functions to be performed through a process of competition for preferential locations among the uses in the real estate market.

3. The institutional framework of the market and the socioeconomic forces operating within it can be controlled or modified only slowly and with great difficulty. If the future structure of the city is to be fitted into a predetermined or "planned" pattern that is at variance with that pattern which would otherwise eventuate, social controls must be applied to certain market forces or modifications must be made in the institutional framework within which the market operates. Such artificially induced change will meet with strong resistance.

4. The area of social control to accomplish corrective planning is small in comparison with the area over which control cannot effectively be exercised. The basic forces and processes of city growth move inexorably forward, and the efforts of man to modify them are puny and ineffective in comparison. Institutions are constantly changing but by an evolutionary process rather than as a result of conscious direction in accordance with plan. Only minor changes from the natural pattern can be accomplished without major changes in the institutions that form the market framework. These minor changes may have great social significance.

5. City planning starts with the process of forecasting the pattern that will naturally evolve from social forces as they operate within the market framework. City planning thus starts with an analysis of the natural market forces. Much of the plan directly expresses the unmodified effect of these forces. This part of planning requires a thorough understanding of social forces and institutions and requires the application of social-science methodology.

6. The next step in planning is to determine upon what modifications of the natural growth pattern are socially desirable. The social significance of modifications is a matter involving economic, sociological, legal, and political considerations. Except for sanitation or engineering problems involving minimum standards commonly accepted, judgments of the social significance of modifications in urban structure require a point of view and a background of education not provided in technical schools.

7. The practicability of accomplishing modifications determined to be socially desirable must be tested by an analysis of market forces and related institutions. Modifications can be accomplished only by positive action. It is necessary to determine at what points in the market process stimulants or controls must be applied in order to accomplish the plan and what market forces or institutions must be subjected to pressure. The various control devices must be tested as to practicability and with respect to the probable repercussions in other parts of the market, so that reform at one point shall not be offset by retrogression at another.

To a considerable extent the planner is engaged in undoing the damage to the urban structure that is the result of the market imperfections of the past or the errors of past master planners. He must also make adjustments to new conditions in existing land use arrangements that may have been adequate under past conditions. The master plan, having been prepared under one set of conditions, becomes imperfect as conditions change with time; it must be constantly modified with changing factors of demand, structural obsolescence, the broadening of understanding of community problems, and changing community objectives.

The Planning Process. The preparation of a master plan of land use for a community should start with an analysis of the physical setting of the community, the economic base of its existence, present and prospective, and the characteristics of the people of the community.⁴ The existing land use pattern, the street system, and the transportation network should be mapped and studied. Another important basic inquiry is into the geographical distribution of population, the pattern of economic and social groups, and the daily movements of the population within the community. Other fundamental surveys should cover the form and characteristics of local government, the community organization in terms of active interest groups, and the local traditions and community spirit that form the personality of the city.

Perhaps the most fundamental aspect of the planning process is the study of how the community makes its living and the outgrowing forecast

⁴ Much of the material in this section should be credited to the excellent presentation of the essentials of the planning process found in "Action for Cities, a Guide to Community Planning," *Bulletin 86*, Public Administration Service, Chicago, 1943.

of economic factors. The sources and flow of the economic lifeblood of the area are the chief determinants of the number and nature of job opportunities, population change through migration, and the land use needs for industry and commerce. To some extent, the community can determine its own economic destiny through a campaign of economic action to attain the goals of economic well-being that it has set for itself. But the major economic forces are beyond its control, for they are the products of the location of the city in relationship to resources and markets.

Communities, like individuals, can within the limits of their income potentialities determine their own standard of living. Thus the determination by the community of the standards that it considers to be minimum and for the attainment of which it is willing and able to pay is an important step in planning. These standards are in terms of such aspects as land use density, health and recreation, public safety, cultural and educational development, housing, and neighborhood environment.

The preparation of a ground plan for the community, in light of the underlying analyses, forecasts, and community goals, first requires a determination of the area to be planned, for it is rare that any set of political boundaries will describe a logical planning unit. A next step is to decide how much land will be required for different uses and what is the most desirable pattern of space relationships among the various functional areas. The existing physical development of streets, utilities, transportation lines, and terminals will be a major factor in determining the cost and practicability of altering the present ground plan to a closer fit to the ideal. Certain existing areas will be fixed by reason of proper location or the great cost that a shift in use would involve. Other areas will be in transition from one predominating use to another, and the plan must properly express the underlying forces of change. The plan must also serve to constrain these forces of change so that the final product of the transition is a use area that fits into a logical community pattern. Of particular importance are the peripheral areas of expansion, for it is the best economy to control new development with community interests in view in order to avoid the need for future expensive readjustments.

The final ground plan that is accepted as the master plan for the city is usually a compromise between the ideal and that which is practicable from a financial standpoint. However, the plan is a guide for the future and does not contemplate that major readjustments be made immediately. The plan serves as notice to all people of a land use goal toward which the community will attempt to move and which will serve as a frame of reference for various land use controls. The business decisions of property owners will be strongly influenced by the future city structure that

the plan proposes, and there will be added certainty of a pattern which approaches that of the plan once the community has accepted the master plan as the blueprint for the future.

Zoning

As the term suggests, zoning involves the defining of geographical areas within which various sets of limitations on land use are enforced. When a land plan for the community has been adopted and a community standard of living set as a goal, zoning becomes one of the major methods for giving effect to the plans. On the basis of the land use structure that the master plan has set, the area may be divided into land use districts. It is customary to determine a hierarchy of use types from single-family residence down through multifamily residence, commercial, and industrial. In modern zoning practice, each of these classes is further subdivided. The outlining of the use districts crystallizes the proportioning of land use by type as expressed in the master plan and sets the structural pattern of land uses for some time to come.

It is common practice to establish use districts from which lower type uses are excluded but which are open to higher use types. For example, a single-family house may be built in a two-family district, but no commercial or industrial uses may come in. Some zoning ordinances go farther and exclude residential use from commercial and industrial districts where the type of development is likely to be detrimental to family life.

It should be recognized that zoning of itself cannot generate urban growth. Zoning simply serves to direct the forces of growth into a desirable geographical pattern. If the forces of growth are quiescent, zoning is inoperative; if zoning fails to conform to the basic forces of the market, it can do more harm than good. An example of this is found in many cities where excessive areas have been zoned for commercial development. Such practices have not, of course, created additional needs for commercial uses but have served to mislead investors and tax assessors into believing that all property zoned commercial would command a premium price.

A final fundamental of zoning is that it deals only with future land development involving either the original dedication of the land to its original use or a change in use. Zoning is not retroactive and is not used to require the removal of nonconforming uses that exist at the time of the adoption of the zoning ordinance. However, when a nonconforming use is terminated, such as the closing of a nonconforming grocery store in a residential district, any reuse of the structure must conform to the use zoning in the area. There has been considerable discussion in recent years of the value of retroactive zoning, so that nonconforming uses that

originated before the effective date of the ordinance might be terminated and the full intent of the zoning act thus realized. At least one state permits such zoning, but the constitutionality of the procedure is not generally accepted.

Zoning ordinances are the vehicles of control not only of land use but also of the placement and bulk of the structures that are erected and, in many cases, the population or family density. The placement of the structure on the land is controlled by front-yard, side-yard, and rear-yard requirements. The purposes of such limits are to assure light and air, decrease fire hazards, and provide for an orderly and attractive arrangement of the buildings in the area. The bulk and contour of the structures in multifamily residential, commercial, and industrial areas are often limited by restrictions on over-all height and by requirements for setbacks at the upper stories.

Population density is controlled for each area by zoning regulation of the type of structure permitted, the limitation on the number of families per structure, the maximum land coverage of the structure as determined by the yard requirements, and provisions calling for a minimum number of square feet of lot area per family.

In an earlier chapter the legal foundation of zoning was discussed in connection with the consideration of the police power of the state. Almost all states have adopted an enabling act that specifically grants to municipalities the right to zone. Under the enabling act, the cities may adopt zoning ordinances, which take the form of a map setting forth the use districts and a text that establishes the regulations applicable to each district. The ordinance also sets forth the procedure for securing exceptions to the ordinance where it works an unusual and unnecessary hardship on an owner.

The problem of exceptions to the zoning regulations is a serious one. The state enabling acts generally provide that the municipality may establish a board of appeals or adjustment to hear property owners who suffer unreasonable hardship from the zoning restrictions as a result of irregular topography or the unusual development of surrounding property. If the case has merit, the board of appeals may grant a variance from the ordinance. It is not sufficient that the owner might secure a greater financial return through a prohibited use.⁵ If more than one lot is affected, or if a change is involved that is seriously at odds with the original zoning objectives, the board of appeals may recommend an amendment to the ordinance, which must be approved by the city council.

⁵ Black, Russell Van Neat, "Planning for the Small American City," *Bulletin* 32, p. 69, Public Administration Service, Chicago, 1938.

The board of adjustment should not have the authority to make major changes in the zoning plan.

There are, of course, many cases where an adjustment of the zoning is just and desirable. It is to be expected that blanket regulations covering large districts must be adapted to unusual conditions. Furthermore, as the city grows and society evolves, the zoning ordinance must be amended. But it is possible greatly to diminish the effectiveness of zoning by overliberal variances. Political pressures are often hard to resist, or sentimental considerations obtain. The result is excessive spot zoning, which violates the basic city plan.

The zoning ordinance of any political subdivision is restricted in its effect to the legal limits. Thus in urban areas, the peripheral regions of growth are uncontrolled except in the relatively few cases where county zoning is in effect. The result is that the new areas of the community, where the land is in the process of being permanently dedicated to various uses, usually grow with a disorderliness that is an eternal detriment to the city.

Subdivision Control

In earlier chapters, the procedures of preparing and marketing land for urban use have been described. Attention was also given to the history of speculation and excess subdivision, which periodically, in the process of urbanization, have brought such grievous financial loss to owners and investors as well as to municipal treasuries. We are now to examine briefly the nature of the social costs involved in misdirected and uncontrolled land speculation and development; we shall also consider public policy with respect to land development as expressed in various types of controls and regulations that have been employed or considered.

In the entire process of city growth, there is no step more critical than the original subdivision of the raw land. To a considerable extent, the size and shape of the lots, the street system that is provided, and the general character of the land planning determine the use to which the land is to be permanently dedicated. The character of the neighborhood is largely established by the way in which the land is subdivided. Furthermore, there is little chance to offset or remedy the mistakes in judgment or the errors of shortsighted cupidity that are reflected in the land arrangements; for, once the lots have been sold off into individual ownership, even a few of them, replanning and resubdividing become virtually impracticable. Subdividers, then, are city builders, builders of a structure that lives down through the years as a boon or a burden for the men and women and children who must live out their lives within an environment over which they had no original control.

It will be well to specify some of the aspects of land development in which poor planning will reduce the utility of the space for individual consumers and for the community. It is obvious that the street pattern of a new subdivision should be integrated with the street pattern of the community and that the arrangements for utility lines, particularly sewer and water, must not conflict with long-term plans for extension of the central system. The design of the streets is important in respect to beauty, utility, and safety. Street widths must be determined by such factors as traffic load and fire-protection requirements. The design of intersections is based on considerations of safety and traffic flow. Problems of drainage and grade require careful handling, and the treatments of curves and parking strips are important to the attractiveness of the neighborhood. Provisions in both street design and land use planning must be made for both on-street and off-street parking.

Even more important than the street pattern is the subdivision of the land into lots or parcels for individual ownership and development. Within the limits of the zoning ordinance, where such controls exist, the subdivider largely determines the future use of the land by his land planning. He may exercise more complete control by private deed restrictions, which exclude certain types of use or call for approval of architectural design. But the dimensions and shape of the lots alone are determinants of use; for example, where the intention is to create a business district, the lots may be narrow and relatively shallow with an alley running along the rear for delivery purposes. In strictly residential areas, the subdivider, by his land planning and private deed restrictions, may encourage the constructing of duplexes, row houses, flats, apartments, or single-family units. And even with respect to single-family homes, the lot dimensions will influence the type and quality of the homes to be built. It is apparent, therefore, that land planning that induces land uses which are inconsistent and inappropriate in their position within the basic urban structure and which do not conform with the master plan for the community is wasteful and creates social costs that are without return.

Land planning that is strictly exploitive in intent usually leads to undersize lots and the overcrowding of the land. Insufficient open spaces are provided for recreational purposes. The result is a neighborhood that, when fully developed, will be congested with buildings and overcrowded with people. There will be the unnecessary irritations of noise and confusion and unjustified hazards of fire and traffic. On the other hand, wise land planning can create pleasant, safe living environments and can minimize costs of grading and street and utility installations. The

natural beauty of the terrain can be fully exploited with little or no added costs.

Land has an unsavory history as a medium for speculation. Extreme examples are the southern California boom in the 1880's and the Florida land boom of the 1920's. The most recent period of general land speculation was in the 1920's, when cities were expanding rapidly and when the building boom, fathered by the postwar housing shortage, led to unprecedented demands for building lots. In an earlier chapter, the point was made that the current house building boom has not been accompanied by land speculation on a wide scale and that there are factors present that may inhibit such a development.

It is important to understand the economic wastes that are the product of excessive land development and speculative activity, for it is these wastes, in addition to the social costs of poor land planning that usually is characteristic of speculative subdividing, that are the justification for various social controls. Speculative subdividing leads to excess subdividing because the objective of the subdivider is to produce lots to sell for speculation rather than for use. Thus there is little relation between the number of lots that the land developer prepares for the market and the lots needed at the time or in the near future for building sites. Because of this imbalance of basic need and supply, the boom inevitably breaks and the current lot owners face falling land prices and a disappearing demand. Individual speculators lose heavily as well as the institutions that have extended credit. Large amounts of capital are tied up indefinitely in sterile assets and unproductive enterprises. The owners who attempt to wait out the slump are subjected to heavy carrying costs in taxes and interest. Very often in the past, speculative subdividing has had an accompaniment of fraud and misrepresentation; buyers find themselves the owners of worthless and unusable land or discover that their titles to the land are faulty. Land developers are often so poorly financed that they cannot carry out their commitments to install improvements; careless buyers find that they possess merely staked-out lots that are of no value as building sites without the installation of costly streets and utilities. Another type of economic waste derives from the premature removal of the land from a productive use, usually agriculture, before it is ripe for productive use for urban purposes.⁶

There is a variety of direct community costs that result from premature, excessive, or scattered subdividing. The communities must bear that portion of the costs of installing utilities which is not met by direct

⁶ Fisher, Ernest M., "Speculation in Suburban Lands," *American Economic Review, Supplement*, vol. XXIII, no. 1, March, 1933.

assessment against the land; furthermore, when special assessments are not paid by the landowners, which is a widespread type of default following a subdivision boom, the burden is often assumed by the community. The overextension of streets and utilities into areas that are only sparsely built up is wasteful and expensive. Costs of government are increased and tax revenues are often insufficient to meet the added costs because of the widespread delinquency that inevitably follows. In many undeveloped or partly developed subdivisions, titles become so confused that the land cannot be sold and developed even when a legitimate demand ultimately arises; as a result, when the city expands in the years following a land boom, new building activity must skip over improved and physically usable lots to more remote areas.⁷

The social dangers and costs of improper and speculative subdividing have led some people to the conclusion that the only guaranty of efficient and economical city growth is public ownership of peripheral areas.⁸ While the powers of government to acquire land for public purposes are well established, even to the use of condemnation, there are no precedents in this country for the acquisition by a municipality of a general reserve of outlying land for purposes of controlling its development by private capital. However, in recent years the notion of public purpose has extended to include the acquisition of land by public bodies for purposes of redevelopment by either public or private agencies. It is usually provided that such land shall be in areas subjected to the forces of urban blight. The Taft-Ellender-Wagner bill, introduced into the Congress in 1947 but not passed, provided for Federal aid to localities for redevelopment purposes and included among eligible redevelopment projects the acquisition and replanning of outlying vacant subdivision land where such land was in the line of growth and was not being utilized because of poor original planning or confused and imperfect titles. In many European cities land is acquired by the municipality in outlying districts well in advance of need for building purposes, and, as the demand for new building sites develops, the land is subdivided and improved and lots are made available for private building on a long-term lease arrangement. Controls over the use of the land may be written into the lease agreement, and when the lease expires the property reverts to the municipality for whatever disposition is appropriate under the circumstances at that time.

Another proposal, only slightly less drastic than the public ownership of suburban land, is to invest land with a public-utility status. Under

⁷ Monchow, Helen C., *Seventy Years of Real Estate Subdividing in the Region of Chicago* (Evanston and Chicago: Northwestern University Studies in the Social Sciences, no. III, 1939), pp. 3ff.

⁸ *Ibid.*, p. 168.

this scheme, control of subdividing would be exercised through the issue of certificates of convenience and necessity. Such permits to subdivide and sell would be available only when there was a demonstrated need for additional building sites and only on the condition of proper land planning. The obstacles to such a scheme are the question of its legal basis and the difficulty of establishing criteria of public necessity.⁹

Though there are few if any effective devices in actual use for the inhibiting of excess subdividing and the synchronization of land development with the demand for building sites, there are more or less effective controls in many jurisdictions over the quality of land planning and over fraud and misrepresentation in the marketing of subdivision lots. Quality controls are found in zoning ordinances, either city or county, which, if well drawn, limit the use of the land in accordance with the basic pattern of the community and the space requirements of various use types. Zoning ordinances may also establish minimum lot sizes, setback lines, and side- and rear-yard allowances.

It is usually provided that proposed subdivision plans be approved by the official surveyor to be sure that the legal descriptions are correct and the dimensions properly indicated. The official engineer must approve the street pattern, street widths, intersections, grades, and other engineering features. In most states, it is required that all plats must be recorded; and, in order to be acceptable for recording, there must be evidence of conformity to all existing regulations, usually in the form of approval by the appropriate public official. In some cases, plats must have the approval of local planning commissions and, when the plat is outside the jurisdiction of a local commission, by the state planning authority. Such approval is ordinarily granted if all the various regulations and limitations have been observed, even though the plat may not represent the best use of the land in terms of modern principles of land planning. However, the planning agency, in the course of approving the plat, is often able to make acceptable suggestions to the subdivider for improving the land plan.

In the subdivision booms of the past, it has been customary for municipalities to extend credit covering the installation of streets and utilities through the special-assessment device. Special-assessment bonds were issued to be retired from the proceeds of a special tax levied for a limited term, usually 5 or 10 years, against the lots benefiting from the installations. In the aftermath of the speculative boom, tax delinquency in both general property and special-assessment taxes was widespread so that the special-assessment bonds fell into default as a rule rather than

⁹ *Ibid.*, p. 170.

as an exception except in the few cases where the cities met the deficits out of general tax receipts. So bad was the experience that many municipalities have adopted the specific policy of refusing to issue special-assessment bonds. In many cases, the policy has been extended to the point of refusing to approve subdivisions until all streets and utilities are installed and fully paid for by the subdivider or, by way of variation, until the subdivider furnishes bond assuring the installation of these improvements. This policy not only avoids the necessity for the advance of funds by the municipality and for the responsibility for the installation of the improvements, but also results in the original pricing of the lots to include the improvement costs so that the buyer knows immediately and exactly what financial obligation he is undertaking. Another argument in favor of this requirement is that the buyer purchases the improved lot as an entity and not, as in the past, the unimproved lot in one transaction and the assumption of the debt for the utility installation as a separate transaction. By including the utility costs in the price of the lot, or, as the case may be, in the price of house and lot, the buyer may finance his purchase in a single mortgage transaction and, in effect, spreads his payment for the utility installation over the full term of the mortgage.

There is another type of regulation that is directed not to the quantity or quality of subdividing but to the protection of the buyer. In the past, buyers have been caught by the thousands through the inability of the seller to give valid title to the lots purchased on land contract when the terms of the contract were fulfilled. Several states enforce controls to prevent this kind of situation by requiring state registration of subdivisions, approval of sales contract forms, evidence of ability to give clear title, and segregation of the buyers' payments to assure the release of the lots from underlying encumbrances. Licensing laws often provide that a subdivider intending to sell off his lots must have a real estate broker's license. The license may be revoked where there is evidence of malpractice and, in addition, the subdivider may be subjected to fine and imprisonment. Finally, blue-sky statutes have been used to a limited extent to ensure full disclosure of all pertinent facts concerning the land to be sold for the benefit of purchasers.

Although there are no specific controls over the amount and timing of subdividing, it is clear that many of the regulatory devices that have been set up since the last land boom will have the effect of limiting speculative and excessive subdividing. The fly-by-night, dishonest land exploiter will be rare in states that have taken steps to protect their citizens against him. It will be more difficult for the poorly financed subdivider to operate; and finally, the controls over the quality of the

land planning will restrict the exploitive profit in land development and will reduce the volume of purely speculative subdividing.

Taxation of Real Property

It is not possible in this chapter on land policy to fully describe the land tax system or to discuss all the many aspects of the property tax problem. Taxes are important in land economics in several phases of the subject. The real estate tax is a major fixed cost or charge against land return, often amounting to 20 or 25 per cent of gross income. Thus, changes in tax policy, in tax rates, or in assessment procedures may have marked effect on the profitability of real estate investments and on the burden of shelter costs in the family budget.

From a legal standpoint, the property tax occupies a highly strategic position as a first lien against the property that cannot be subordinated; it stands ahead of a mortgage encumbrance or any other claim, including the very ownership of the property. The tax is an inescapable cost, a charge that accumulates when not paid and a cost that, like imputed interest, may have no relationship to the productivity of the property; it is a cost that cannot be controlled by the owner or operator once the investment in the property has been made.

Not only are taxes a current charge or expense but a change in the tax will be capitalized in so far as such a change is expected to continue into the future and to the extent that the tax is not shiftable. The result of such capitalization is either depreciation or appreciation in the capital value of the property holding and in the market price at which it can be sold. A tax reduction will enhance the property value and an increase will create a proportionate decline.

Because tax levels and tax policies are important determinants of the net productivity and capital value of real estate investments and because the direction and volume of real estate investment determines the nature of the supply of real estate services and the pattern of urban land use, it is clear that tax policy is land policy. Tax policy is sometimes used intentionally as a device for encouraging certain types of real estate investment, but it is more typical that tax policy is determined by fiscal considerations and that the effect on new real estate investment is not given the weight that it deserves.

From yet another standpoint, the taxation of real property is not to be viewed exclusively as a fiscal problem. Historically, real estate has always been a favored object of taxation, first, because it was difficult to conceal and, secondly, because property was a dependable evidence of ability to pay up until the fairly recent spread of wealth in the form of intangibles or claims and the increase in proportion of individual incomes

in salaries, wages, and professional fees. In days of yore, the tax was a tribute to the lord or ruler, with but few services beyond military protection offered in return. It is natural that taxation was viewed by taxpayers as burdensome and confiscatory. But the modern real property tax in this country is of a different character. It is levied not by despotic decree but out of a democratic process. The taxpayers tax themselves in payment for services that they consider to be essential. It is not true, on the other hand, that the direct benefits of taxation are distributed in exact proportion to the burden; for example, a childless couple is burdened with a share of the cost of the school system from which they have no direct benefit. However, all property owners benefit from services that make the community a more attractive place in which to live and work; the proximity of a school will enhance the value and salability of the home of the childless couple who receive no direct and present benefit. If we may assume that the value of all urban real estate is affected directly and indirectly by the extent and character of tax-supported services and facilities, then the decisions that concern the provision or withdrawal of such services and facilities and the levying of taxes for their support are, in effect, matters of land policy.

Incidence of Taxation. The proposal to increase taxes is always met by a cry of protest from property owners, for it is the owner who makes the payment to the tax collector and who feels the direct impact of the tax. It is often thoughtlessly assumed that the tenant and other non-owner users of the services of real estate can escape taxation. To the contrary, in a static or a growing community, in the long run the property tax is shifted to the tenant. Now this process of shifting a tax increase to the tenant is slow, so that there is no doubt but that the property owner must bear the burden initially in the form of a lower net profit. Considering taxes as a cost, it is clear that an increase in cost will not bring about a corresponding increase in the price of the services (rents), other things being equal. But in the long run, increased costs (in the form of higher taxes) will tend to discourage investment in property to replace depreciated or demolished property or to meet the needs of a growing community for additional facilities. This lag in investment will continue until the pressure of demand is sufficient to push rents up to a level that makes real estate investment again attractive even with the higher tax cost. To the extent that the tax can be shifted, the tax increase is not capitalized, since, having been shifted, the net income of the property remains at the same level as before the tax increase and the capitalized value of this net income is unchanged.

It is traditional in economics to recognize a difference in the shiftability of a tax on land and a tax on buildings and improvements. Such a dis-

inction has little practical importance, since, for urban land uses, the raw land typically represents but 5 to 10 per cent of the taxable value. Furthermore, the distinction is theoretically defensible only when the Ricardian view of rent as a differential is accepted, for then it may be argued that an increase in taxes on all land does not affect the differential utility of the several parcels.¹⁰ When land is considered as a reproducible productive factor, as it has been treated in this book, any difference in shiftability disappears.

Tax Administration. The general property tax is the primary source of revenue for cities, towns, counties, and such *ad hoc* local units as school districts and sewer districts. The Federal government does not levy property taxes and state governments, though once depending largely on this source, now secure most of their revenue through other forms of taxation. Many states do not tax property at all.

The general property tax may be levied on all property—real estate, tangible personal property, and intangible personal property. The real property tax is universal, with a tax on tangible personal property as a usual accompaniment. The local taxation of intangibles such as stocks and bonds is not common, in large part because of the difficulty of administration.

The determination of the tax rate on real estate is by the process of dividing the amount of money which is to be raised through the real estate tax to meet the budget requirements of the taxing unit by the total assessed value of all taxable property. The assessment of real estate for purpose of taxation is supposed to be at full market value under most state laws. This equality is rarely accomplished, for the typical assessment is below market value. In part this fact is explained by the imperfections in the assessment system and its poor administration and in part by the fact that assessments that are above market value are open to criticism, whereas if the relationship is reversed the taxpayer will feel that he is being favored. Whether assessments are generally above or below market value makes little difference as long as all properties are assessed on the same basis. Many states have set up administrative devices for equalizing the assessments among the various local taxing bodies so that after the appropriate adjustments assessed values in all jurisdictions bear the same relationship to market value.¹¹

It has been suggested that assessment practice is, in general, deficient. This fact has economic significance because the results are inequalities

¹⁰ Fisher, Ernest M., *Advanced Principles of Real Estate Practice* (New York: The Macmillan Company, 1930), pp. 334-335.

¹¹ See *ibid.*, Chap. 16, for a general discussion of real property taxation.

in tax burden, which give some investors a special and unjustifiable advantage. There seems to be a general tendency for tax assessors to assess the smaller and less complex properties at nearer market value than the higher priced properties.¹² Another natural tendency is to make downward adjustments in assessed value when property owners make protest and present sufficient evidence but to fail to make equally justified adjustments on properties where no protests are heard. Since no one protests underassessment, it is rare that individual upward adjustments are made, a fact that contributes to the tendency for the level of assessments to be below market prices.

It is a well-recognized characteristic of assessed values to lag in the adjustment to changes in market values. This tendency is found with respect to both changes in the general level of market values and changes that reflect internal value shifts resulting from changing locational or structural qualities. The lag is in both directions, though there may be some greater resistance to downward than to upward reassessment. Some of the reasons for the sluggishness of assessed values are as follows:

1. Inadequate assessment procedure. Many assessment offices are staffed by persons of inadequate training and skill and are undermanned. The personnel is not equal to the task of making adjustments on all properties that have changed in market value. The procedure for securing and analyzing actual market transactions as a basis for assessment is effective in few localities. The high cost and many difficulties of a general reassessment of all properties creates a situation in most communities in which the same assessed values continue in use for many years without change, except for an occasional general and equal proportionate adjustment in all assessments, either up or down, in response to substantial shifts in the market level of real estate values.

2. Resistance to change. There is a strong incentive for assessing officials to maintain assessments, for, once they have been reduced, the public pressure against a later increase is great even when justified by market conditions. Furthermore, the needs of the municipal government for revenue continue unabated without regard to changes in real estate values, so that officials struggle to maintain the tax base on which the governmental services were originally predicated. Thus, the resistance of public officials to a reduction in assessments and the strong pressure from taxpayers against any increase are responsible for the characteristic sluggishness of assessments.

3. Use of the summation method of valuation. Out of practical necessity, the accepted method of determining assessed value is by the use of the summation appraisal formula—market value of land plus cost of improvements new less accrued depreciation. It has long been recognized by appraisers that the use of this method will produce a value figure that has little necessary relation-

¹² Bowman, Mary J., and George L. Bach, *Economic Analysis and Public Policy* (New York: Prentice-Hall, Inc., 1945), pp. 777-778.

ship to the net productivity of the property, which is the basis of market value under normal conditions. Even when data on land values are secured in the market and used to adjust the assessed values, only a few of the limitations on this method are removed. Such adjustments are infrequent in practice; furthermore, in older, built-up areas, transactions involving vacant land are rare. In any case, the fact that the value of the land represents only a small proportion of the total value for most properties means that even a large adjustment in land value would result in only a small change in total value. The general effect of this method of assessment is to make assessments relatively insensitive to changes in the real estate market and to changes in neighborhood conditions that affect property values.

Deficiencies of the Property Tax. The line of argument in the foregoing paragraphs has been that assessed values do not generally correspond with market values. It is further argued by many persons that, even if assessments truly represented market values, the ad valorem property tax is a bad tax because it is not based on ability to pay. The tax is on capital value, which reflects long-term, not current, productivity. The tax allows no offset for the debt on the property and has been appropriately called a "debtors' tax."¹³ It is regressive not only for the reason that small homes and properties are customarily assessed at a higher ratio to market value than larger properties but also, in the case of shelter, because the poor pay a higher percentage of their incomes for housing than the rich.¹⁴

When the property tax is tested in terms of benefits received, it is apparent that market value is no measure of benefits. All real property receives benefits from various governmental services, but it is impossible to measure or allocate such benefits with anywhere near the precision that is implied by the property tax system. Furthermore, the taxpaying properties are not the exclusive beneficiaries of the services that they support. For example, other forms of property benefit from police and fire protection, and the persons of the citizens receive a multitude of tax-supported benefits, such as public libraries, medical care, welfare services, and band concerts, which carry only the most general and indirect benefits to the properties as such. Finally, suburbanites who earn their livings and find much of their entertainment in the central city enjoy benefits for which they pay nothing.

There is no reasonable expectation that the property tax will be supplanted, nor even that its burdens will be reduced. The demands for additional public services continue to expand and more revenues are

¹³ Groves, H. M., "Income versus Property Taxation for State and Local Governments," *Journal of Land and Public Utility Economics*, November, 1946, p. 346.

¹⁴ *Ibid.*

required. There is some hope that the forms of taxation that have come into use to supplement the property tax may absorb much of the growing burden. State and Federal aids to localities are increasing in variety and volume; sales taxes are used by a few cities; the most promising new source of revenue for municipalities is the local income tax, which is now being collected in a few areas.¹⁵ It is significant that few proposals are heard for the relief of the tax burden on real estate through a reduction in the public services that the tax supports.

Directing Investment through Tax Policy. We come now to a brief review of attempts that have been made to use the real estate tax to direct real estate investment in the public interest. For example, after the First World War, a few states sought to combat the housing shortage by offering tax exemption to new house construction. The same proposal has recurred in various forms in the current housing crisis. Tax exemption or abatement is in use to encourage public and private investment in housing for persons of low income, for the middle-income group, and for veterans. Federal aid to local housing projects for families of low income is accompanied by local aid in the form of tax abatement; New York State has provided tax abatement for private housing projects under her redevelopment legislation; Wisconsin proposes to provide state aid to local-authority veterans' housing projects, which are tax exempt but may make payments in lieu of taxes.

Tax policy may be used to encourage the improvement of vacant land, as in Pittsburgh, by applying a differential tax rate with the higher rate on land value and a lower rate on improvements. The familiar "single-tax" scheme of Henry George would tax away all private interest in land on the reasoning that land value, or economic rent, is created by the community, not the individual, and that the community is thus entitled to the return. The adoption of this plan would revolutionize our land system and the whole institutional framework of private ownership.¹⁶

A common form of tax benefit is homestead tax exemption, which is in effect in some 14 states.¹⁷ It is an expression of public policy to encourage home ownership. The usual form is to exempt owner-occupied homes from the taxation of the first \$3,000 to \$5,000 of their value.

¹⁵ *Ibid.*

¹⁶ George, Henry, *Progress and Poverty* (New York: Garden City Publishing Company, Inc., 1926). For a briefer presentation of the principles of the single tax see Harry Gunnison Brown, "Should Bare Land-values be Taxed More Heavily?" *Journal of Land and Public Utility Economics*, November, 1928, p. 375.

¹⁷ Barlowe, Raleigh, "Homestead Tax Exemption, A Tenure Improvement Measure?," *Journal of Land and Public Utility Economics*, vol. XXIII, no. 4, November, 1947.

Urban Redevelopment

At various points in this volume we have explained that the basic problems of urban land use are created by the maladjustments of a dynamic society and a rigid physical urban structure; that the dedication of land to a given use and the physical characteristics of that dedication are of long life; that the needs of urban society for the services of land are in constant flux; and that buildings and street patterns and space relationships of land uses become obsolete and inefficient with the changing nature of demand. The physical deterioration of structures is often a result rather than a basic cause, for structures can be maintained in use indefinitely with proper upkeep and repair, and, where such maintenance is not good economy, the reasons are usually found in the underlying obsolescence of the building or of the urban structure or both.

The term "urban redevelopment" has acquired a connotation that carries the implication that the redevelopment of cities is somehow a recent phenomenon and that it is the creature of the several legislative acts and proposals of late years that have been associated with the term. The term, to be sure, is quite properly descriptive of the process of urban growth and adjustment with which the legislation is concerned. But on the other hand, let no one be misled in believing that urban redevelopment is a product of the atomic age; the redevelopment of cities is an ancient and basic process by which the urban structure, painfully and imperfectly, but continuously, moves to adjust itself to the ever-changing needs of the community. It is through the process of succession, the replacement of one land use by another, that the natural redevelopment of cities takes place. The succession of uses is induced by various physical, social, and economic factors, often working in concert. For example, the aging of structures that results in a reduction in their productivity and environmental changes that alter the pattern of rental income are factors that often work together to create situations in which the replacement of original land uses becomes economically advisable. In addition, there are general forces that may influence all properties within the community, such as broad social and economic changes or technological evolution, which result in significant shifts in the nature of the demand for the services of the land. There are many examples that may be given of successions of uses that are, in fact, aspects of urban redevelopment. The replacement of single-family residences by multifamily apartment structures or by retail-store buildings is a commonly observed phenomenon. In central retail districts, a large office building or department-store structure may supersede a group of smaller

retail-store buildings or loft structures. In older parts of the city, school buildings that have become untenanted as the number of school-age children diminishes are taken over as office buildings or are demolished to provide parking areas. Evolutionary changes in the street pattern may result in replacing a strip of slum housing with a broad boulevard, and on the outskirts of the city a golf course may be converted into residential building lots or, perchance, into a cemetery.

Urban redevelopment through use succession is a continuing process of readjusting the physical characteristics of the community to its socio-economic needs. It takes place parcel by parcel, sometimes proceeding slowly, with substantial changes accumulating only over a period of years. At times succession is accelerated by rapid city growth and prosperity, by rapid social or technological changes, or by the catastrophes of fire or war. Under other conditions, succession is inhibited by population decline and economic decadence.

The present land use structures of the mature cities of this country stand as testimony to the inadequacy of the natural process of urban redevelopment through succession. The process is imperfect and the results bad. If it were otherwise, we would have little need for city planning or for urban redevelopment laws, for the urban structure would quickly and neatly adjust itself to each social, economic, or technical change. But as we look about us, we find that natural succession has not, in the typical community, prevented the development of an inefficient pattern of land use, an archaic street pattern, inadequate allocation of space for essentials such as parking, a retail center that becomes progressively farther and farther removed from the patrons that it serves as the city expands, and, finally, a burden of slum areas and urban blight, which levies heavy social costs. It is this ineffectiveness and lag in the process of readjustment through land use succession that have been urged as the justification for social intervention through urban redevelopment legislation. It is the social costs that are created that are said to call for legislation designed to accelerate and to control succession.

Inhibitors of Succession. Succession of land uses for its own sake is hardly desirable; change in advance of the appropriate time will only contribute to the inefficiency of the urban structure. There are times when succession appears to lag behind the needs of the community, when actually the fundamental factors that call for a readjustment of land uses are not present. It may be that population growth is lagging or that certain of the basic economic activities are declining, so that there is no immediate need for the more intensive types of land use, which would be called for in a growing and dynamic community. It

should be clear therefore that the rate of land use succession is not constant and that the extent of the desirable and appropriate shifts in land use are not proportionate to the passage of time. We shall see that the inhibiting factors that influence succession are not only those of a fundamental nature beyond the control of owners but that they may also arise from the specific management decisions of those who control the use of land. It will now be appropriate to discuss the common reasons for the lag in the succession of land uses and the methods that might be used to facilitate succession where succession is socially desirable.

RESISTANCE OF NET REVENUE TO DECLINE. It has been demonstrated in Chap. 13 that the economic life of a project will be extended by postponing the time when net revenue becomes less than the site rent that might be produced by an alternative use. Hence whatever factors tend to maintain or increase net revenues during the later years of operation will lead to an extension of the operating life of the enterprise. There are certain circumstances when net revenues are sustained as a result of forces that are beyond the control of the owners. For example, changes in the environment may lead to increased marketability for the space and thus to higher rental rates and occupancy percentages. Furthermore, changes in conditions may make it appropriate to redevelop the property partially by converting it to more intensive use. Such a case would be the conversion of a large old residence into a number of small apartments, which would normally lead to an increase in net revenue. Both of these types of change are generally desirable and simply reflect underlying influences that are the creatures of urban growth.

There are certain positive policies that an owner may pursue by way of resisting the decline in net revenue that normally comes with age and with the deterioration of the environment. For example, an owner may find it advantageous to overcrowd his structure and thus to increase the gross revenue. Another device on the expense side of the books is to neglect upkeep and maintenance and thus to increase the net return. The overcrowding of dwellings and the neglect of maintenance generally contribute to blight and thus offer justification of some form of social control. Thus, by more stringent police power regulations and even by the adequate enforcement of existing regulations, it is possible to reduce overcrowding and thus gross revenues and to enforce the maintenance of operating expenses at levels that are at least sufficient to avoid the creation of hazards to health and safety. Such policies would lower net revenues and would thus bring a quicker end to the economic life of the projects

affected. It may be pointed out that an increase in taxes would have the same effect.

WITHHOLDING FOR A FUTURE HIGHER USE. There are many cases in the blighted areas of our cities where an owner is withholding his property from redevelopment into a new use that is justified by the current environmental situation. This withholding is in anticipation of a substantially higher and more intensive use, which is expected to be appropriate at some time in the future. Thus, rather than sell the property or redevelop it, the owner holds on and may even operate at a loss. Furthermore, his asking price for the land is based upon his expectations with respect to future environmental developments and thus the nature of appropriate future uses of his land. At times the expectations of the owners in such areas are justified, but, more often than not, they are fond hopes that cannot be supported by the facts. An example of the kind of situation that is under discussion is the case of an owner who continues to operate an old residential structure, although he could secure a higher return by immediately developing the land into apartment-house use. However, his withholding of the property is based upon the anticipation of the expansion of the central business district and a further increase in land value based upon possible retail use.

One remedy for the withholding of properties from presently appropriate reuse is the education of owners on the urban facts of life. Where owners can be made to realize the improbability of any further increase in the potential use value of their properties, they may be more willing to sell at a reasonable price or to redevelop their own properties in accordance with the realities of the situation.

DIVERSITY IN ECONOMIC EXPECTANCY. It is typical of any transitional neighborhood that there is a lack of uniformity among individual properties with respect to their readiness for redevelopment. Some of the properties are approaching the end of their economic lives, while others appear to be well beyond that point and are being operated at a loss or without adequate maintenance. The result is that the succession for individual properties is inhibited by the environmental situation that exists. Thus, although basic housing demand might warrant the building of apartment-house developments in the area, the generally low-grade character of the neighborhood would be a detriment and would make it difficult to secure high enough rents and a sufficient occupancy in the new projects. However, if the whole neighborhood could be cleared and redeveloped at the same time, the location within the basic city structure would bring about a considerable increase in site rent. Thus piecemeal redevelopment is not appropriate whereas wholesale redevelopment would maximize the aggregate site rent.

It is apparent that if an entire neighborhood is redeveloped, it will be necessary to absorb the remaining value in those enterprises within the neighborhood for which liquidation is not yet justified, i.e., where the net revenue is still at a higher level than the site rent that could be produced under a new use. It is this fact that inhibits general redevelopment of a neighborhood by private agencies and may justify public action in order to consolidate ownerships and to pay off the property owners whose projects are not ready for liquidation.

There is often an advantage to be gained from the consolidation of ownerships on a scale smaller than the neighborhood unit. It is an accepted principle that under certain circumstances the total value of two contiguous parcels under a single ownership may be greater than the sum of the value of the separate parcels when held under different ownerships. Thus, a device that might assemble a parcel of land of sufficient size for an apartment development may result in a higher site rent for the land than the sum of the site rents if the individual parcels were redeveloped separately.

INEFFICIENT CITY STRUCTURE. Redevelopment in many neighborhoods is blocked by a failure to make basic readjustments in city structure through such means as street widening, the provision of parking areas, parks, and schools. For example, the central business district might expand in many communities instead of shrinking if adequate provision were made for mass transportation and automobile parking. Whether or not it is desirable for central business districts to expand, the situation in many communities illustrates how the provision of parking facilities and the revision of the basic system of communication might encourage the outward spread of the central retail area through the succession of uses.

Redevelopment Legislation

Redevelopment laws, which have been passed in many states, together with proposed redevelopment legislation for both states and Federal government, are all designed to facilitate land assembly or to employ subsidy for the purpose of filling the financial gap between present net revenues of existing land uses and the site rent that can be produced by redevelopment. The powers provided for land assembly and the consolidation of ownerships make possible public purchase or condemnation and, in many cases, the purchase or condemnation by specifically chartered private redevelopment corporations. Thus it is possible to assemble a sufficient area of land to create a new self-contained neighborhood and to take advantage of the gains from plottage.

The recent rush of state redevelopment legislation had produced some

type of redevelopment law in 23 states and the District of Columbia by April, 1947. In addition, at that time new bills were pending before 13 state legislatures. There have been several bills before the Congress providing for Federal aid to local redevelopment schemes, but none of these proposals has been passed.¹⁸

State redevelopment laws fall into three main groups: ¹⁹

1. Statutes to encourage private enterprise through private redevelopment corporations to carry out both phases of redevelopment, *i.e.*, land assembly and clearance and the physical redevelopment of the area. For these purposes, certain public powers and aids are made available to such corporations.

2. Statutes that place the responsibility for land assembly and clearance on the municipal bodies or other local instrumentalities. The rebuilding of the areas remains as the function of private enterprise.

3. Statutes that are like 2 except for specifically designating local housing authorities as the public body to perform the functions of land assembly and clearance.

The better state laws provide for adequate land use controls in connection with redevelopment schemes, so that the new pattern of land use may conform to the master plan for the community.

The advantages of adequate powers of land assembly in the hands of private redevelopment corporations or public bodies are not, save in the exceptional case, sufficient to accelerate the natural processes of succession. The gap between the cost of acquisition of the land and the site rent or use value of the land as redeveloped is too great. Even though the expectations and thus the asking prices of the present owners in blighted areas are unjustifiably high, the fact remains that the purchase price or even the court award upon condemnation is actually based upon these expectations. Two types of subsidy are possible to fill this gap—a capital grant and an annual or operating subsidy. Various proposed Federal measures provide for capital grants and for annual payments; most state laws permit an operating subsidy in the form of tax abatement; a few states have provided for a capital grant.

The social justification for public intervention in the process of urban redevelopment or succession may be found in the reduction of the social costs of blight that accelerated succession may effect. Redevelopment at the appropriate time and in the proper manner tends to increase the efficiency of the urban structure, to reduce frictions of transportation and communication, and to make the community a generally more desirable

¹⁸ A late form is found in Title VIII in the National Housing Commission Act (S. 866, 80th Congress, First Session; introduced Mar. 10, 1947).

¹⁹ National Housing Agency, Office of General Counsel, *Comparative Digest of the Principle Provisions of State Urban Redevelopment Legislation*.

place for living. Finally, redevelopment may increase the net proceeds from property taxation by resulting in larger assessed valuations and smaller tax delinquency. The so-called "Detroit plan" is based upon this principle. The plan provides that the city advance a capital subsidy to make up the difference between costs of acquisition and reuse value and that this capital subsidy be retired through the increased tax revenues that will result from the redevelopment.

It is notable that urban redevelopment and the provision of housing for families of low income are problems that can hardly be dissociated. Much of the incentive for urban redevelopment activity is based upon a desire to eliminate slum conditions and to provide adequate low-rent housing. It is hard to visualize a redevelopment plan involving the displacement of many slum families that does not at the same time contemplate a housing program, either on the redeveloped site or elsewhere, which can provide decent housing within the financial reach of the displaced families.

CHAPTER 15

THE ECONOMICS OF HOUSING POLICY

PART I. THE NATURE OF THE HOUSING PROBLEM

Imbalances and Rigidities in the Postwar Housing Market

The end of the war found this nation unprepared to meet the emergency of the most serious housing shortage in our history. So short was our supply of housing that vacancies completely disappeared in almost every urban area, large and small. Doubling up of families through sheer lack of space was more widespread in many areas than at the bottom of the worst depression in history, when the compulsion was economic necessity. And though the ability to pay for decent housing was more universal than ever before, the desperation of families in need of housing created substandard housing conditions at an unprecedented rate.

The causes of this parlous state are well known, but the proportions of the current shortage were not foreseen by any of the experts. It was recognized that the disruption of normal building operations during the 4-year war period would lead to a shortage in face of the inexorable process of population increase and family formation through marriage. In fact, the rate of family formation was abnormally high during this period of subnormal house production. But the failure of millions of migrant warworkers to return to their original homes is a phenomenon that no one fully foresaw. We knew that there would be a deposit of new citizens left by the receding tidal wave of wartime migration, but no one suspected the extent of the deposit. To this deposit was added a substantial layer composed of veterans who were reluctant to return to the villages and farms and who were attracted by the advantages and opportunities of cities and regions in which they were stationed during their war service.

Along with the intense housing shortage there came a natural ac-

companionment—inflation. Sales prices of houses rose to levels 50 to 100 per cent higher than the 1941 levels, with the most extreme inflation to be found among the low- and medium-priced properties. The fantastic sales prices were the product of desperation implemented with cash. Never before were so many families with substantial bank accounts so urgently in need of shelter. Costs of construction kept pace with market prices for existing houses, so that there was little price advantage in buying or building a new house over buying an old one. Practically, the relationship between market price and cost of reproduction has little influence on the price offer of a man whose family must have shelter *now*.

The level of controlled rents was abnormal in the face of so severe a shortage. No other price of major significance so well held the line. This situation was a source of comfort to millions of tenants, although many landlords were pinched between frozen rents and rising costs of operation. A further rigidity growing out of rent control was the unnatural permanence of tenure among tenants by reason of protection against eviction combined with the absence of alternative housing choices. The recent rapid increase in the proportion of home ownership in nonfarm homes from 41 per cent in 1940 to 52 per cent in 1947 is unnatural; tens of thousands of families that in normal times would live as tenants have been forced into the purchase of a home through the sheer necessity for shelter. This expedient has been encouraged among veterans by the liberal terms of financing that are available to them through the Veterans Administration. An abnormality to be discussed more fully in the paragraphs that follow is the slow rate of recovery of the house-building activity. In the face of a very large absolute shortage of housing accommodations at the end of the war, with demand made effective by plenty of ready cash, we would expect an immediate building boom. Actually, the recovery of house building was slow; during the first half of 1946 houses were being started at little more than the rate of the immediately prewar years but were being completed at less than one-third the rate.¹ It was not until the fall of 1947 that the rate of residential building exceeded prewar levels.

One of the early obstacles to a rapid increase in house production was the competition of nonresidential building in the face of a limited supply of materials and labor, both skilled and unskilled. When all restrictions on building were released in October, 1945, a disproportionate share of

¹ The National Housing Agency reported 331,000 units of permanent housing started in the first 6 months of 1946 and 153,000 units completed. Other sources estimated the time required for completing a house to be 6 to 8 months as compared with 3 to 4 in prewar years.

the scarce materials and labor began to flow into commercial, industrial, and institutional construction. Apparently, plans for this type of structure were further advanced than in the case of residential building projects, and there was greater willingness to pay whatever prices were necessary in order to permit construction to proceed with dispatch. The reinstitution of priority controls early in 1946 was designed to ensure that at least half of the available materials would find their way into house building.

Another rigidity confronting the construction industry was the system of ceiling prices on building materials. There is some evidence that the production of certain materials and equipments was restricted because of delays in making adjustments in ceiling prices to counterbalance increases in production costs. In the field of construction labor, the apprenticeship rules of the craft unions have limited the entry of new workers over recent years, so that a shortage of skilled labor has developed. The reluctance of some of the unions to relax these limiting rules under present conditions and the time required to train craftsmen have been handicaps to the rapid resumption of house-building activity.

The slow recovery in the rate of construction and the high cost of building were primarily the products of material shortages, labor shortages, and rising wage rates. But the uncertainties of the market were important contributing factors. Contractors were reluctant to bid on jobs because of the difficulties of securing labor and materials; these essential components were not to be had on order, and the contractor was forced to prospect for them at great expense of time and trouble. Black-market materials commanded a premium, and bonuses to workers were often necessary to the completing of a job. Contractors were unwilling to guarantee completion dates except at prices so inflated that all the many contingencies were amply covered. Even when restrictions on rentals covering new construction were relaxed, investors were reluctant to make commitments of capital for rental housing at peak-level building costs; such investments are fixed for all time, whereas rents may fall below the point of reasonable return on so high a cost when demand and supply later come more nearly into balance.

Origins of Postwar Rigidities

In the main, the early postwar imbalances in the housing market and the rigidities that restrained the normal market processes of readjustment were the legacies of the war economy. In the years just before the war, the building industry was operating effectively and had reached a volume of house production of over 700,000 units annually. Building costs had risen only moderately; supplies of labor and materials were

adequate, and the number of building organizations in the field was sufficient to meet all needs. In 1940, the housing census had shown that the urban areas in the country were rather well balanced in terms of aggregate demand and supply of dwelling units. On the other hand, the chronic malady of substandard housing was still uncured.

The requirements of war quickly brought drastic changes in the housing market and the building industry. The great wartime migrations to centers of war production, to the shipyards, the aircraft plants, and the arsenals placed strains on the housing supply in those areas. Rent controls were an early necessity, covering both new and existing structures. Control over sale prices of houses was imposed only on new houses, and the spiral of inflation mounted in the prices of used houses up to the fantastic levels of 1946 and 1947.

The conversion of the building industry to wartime status was begun in some degree before our entry into the actual conflict. The expansion of industrial facilities was drawing labor and materials into nonresidential building. In the fall of 1941, all nonessential construction was halted in order to preserve materials and man power for war needs. The result was to put many building organizations out of business. Building labor moved out of the residential field into industrial construction and the building of cantonments, powder plants, depots, and other military facilities. Many skilled craftsmen found employment as maintenance workers and in other capacities in war plants at higher pay and better working conditions than in the construction field. Others found their way into the Navy Seabees and built airfields and naval installations the world over. And, as in every other industry, the armed services claimed a share of the younger men. It is not to be assumed that the house-building industry disappeared during the war. On the contrary, in communities where there was need for the housing of warworkers, materials were made available for the construction of shelter both directly by the government and by private builders with priority assistance. During the war period, a total of 1,841,000 dwelling units were thus produced, of which over 800,000 were permanent houses built by private operative builders. The rate of building slackened somewhat during the last 2 years of the war, so that in 1944 only 139,000 units were built by private builders and in 1945 229,000 units. Furthermore, the residential building that took place was distributed abnormally; it was adjusted to the temporary wartime need for the housing of immigrant warworkers and not to the long-term basic market requirements of the community. Thus, in many of the urban areas of the country, no new construction took place while in such centers of activity as Norfolk thousands of

temporary units were built by the government and a rate of private building was attained that was far above any past peacetime level.

The production of building materials and household equipment was greatly disturbed by the war. Production was cut off in the case of items that required the use of scarce metals, such as bathtubs, plumbing fittings, copper pipe, metal lath, and many other items. The production of lumber and plywood was actually increased, but the direct war needs absorbed all the production except that necessary for the housing of war-workers. Long before the end of the war, all prewar materials and equipment had been absorbed and the shelves of the lumber yards and distributors of building products were bare. The early postwar burgeoning of the house-building industry found the channels of material distribution to be empty and many materials more difficult to secure than at any time during the war. At the same time, the supply of skilled labor in the building trades was at the lowest level in many decades. The number of active building organizations had dwindled during the war years to but a fraction of the prewar number.

The sluggish pace of recovery in the house-building industry is indicated by the 1945 and 1946 production figures. The total number of new dwellings for which permits were issued was 229,000 in 1945; in the first 6 months of 1946, only some 153,000 units were completed. These months were a time of great confusion in the building industry. In the haste to shake off wartime controls, and by demand of the spokesmen of the industry, the regulation which, from November, 1941, had restricted all construction to that which was essential to the war effort, was dramatically wiped out on Oct. 15, 1945. The result was disastrous to house building, for the vast, dammed-up backlog of nonresidential construction was loosed along with the backed-up demand for luxury-class homes. Thus, 90 days after the removal of limitations, a new order was issued that restored the priority system in the building-material field for the purpose of channeling at least one-half of the available supply into homes of \$10,000 or less in value or \$80 or less in rent, for which veterans were to have preference.

All of us are familiar with the scope and intensity of the housing shortage that developed during the months following the end of the war. Every city, town, and village in the nation experienced an unprecedented overcrowding of its housing supply as the veterans returned. The National Housing Agency estimated that, at the end of 1945, there were nearly 2 million families who were living doubled up with other families; 700,000 of this number were married veterans who were forced to double up during the last quarter of 1945 because they could not obtain separate homes. It was estimated that by the end of 1946 another 2 million or

more families would be in need of housing. The strong political pressure for prompt and drastic governmental action led to the appointment of Wilson Wyatt as Housing Expediter and, a little later, as Administrator of the National Housing Agency.

The Wyatt Veterans Emergency Housing Program announced in February, 1946, called for a tremendous increase in the volume of house building in order to produce 2,700,000 units, which was the goal for the 2-year period 1946 and 1947. The program was to be operative through controls on nonessential construction and limitations on residential construction that was beyond the financial reach of veterans. Incentives were to be employed to attain the unprecedented levels of material production that was required, with primary reliance on subsidies or premium payments to producers rather than increases in Office of Price Administration ceiling prices. Subsidies, price adjustments, Federal loans, lease or sale of surplus war plants, and guaranteed markets were to be used to encourage the development of new materials and the rapid expansion of the prefabrication industry. It was also proposed to limit speculation and inflation in existing housing and building lots by imposing price ceilings. The required increase in off-and-on-site labor from 650,000 to 2,150,000 by mid-1947 was to be accomplished through a large-scale apprentice-training program, recruitment drives, and a raising of abnormally low wages. The main features of the Wyatt program were incorporated in the Patman bill, introduced in the House of Representatives late in 1945.²

The Wagner-Ellender-Taft bill (S. 1592, General Housing Act of 1946), under consideration for some time, was blanketed in as part of the Wyatt program. This bill was directed to long-range objectives but included features that were useful in combating the housing emergency. The provisions included a liberalization of lending terms for Federal Housing Administration-insured mortgages to encourage more construction for families of modest income for both sale and rent. Other major provisions were financial aids to localities for redevelopment schemes, a farm housing program, and a continuation of subsidies for local low-rent public housing projects under the plan inaugurated in the U.S. Housing Act of 1937.

It is significant of the temper of the times in housing that two central features of the Wyatt program, as incorporated in the Patman bill, were vigorously opposed in the Congress. Both of these provisions—the use of subsidies and premiums to stimulate building-material production and the imposition of price controls on existing houses and on building lots—

² The 1945 Housing Stabilization Act, H.R. 4671.

were in accord with the administration policy of hold-the-line on prices; the opposition to both provisions was a part of the campaign of organized business groups to reduce or eliminate governmental controls over prices. It was agreed by these groups that increased production could best be effected by a release of price control; they were willing to face the risk of further inflation. The opposition to the control of the obviously inflated prices on existing homes and the rapidly rising prices on building lots had no other rationalization than a basic abhorrence of any further extension of OPA authority and of governmental control in general. As a result of this opposition, both of these features were eliminated by the House and the price-control provisions were deleted by the Senate. As finally passed, the Patman bill contained authorization for a reduced amount for subsidies and premiums.

The opposition to the Wagner-Ellender-Taft bill and to substantially the same measure when it was reintroduced as the National Housing Commission Act or T-E-W bill (S. 866) in March, 1947, centered on the public housing feature. The fight against public housing has come from the business groups who feel that their interests will suffer by any further invasion of government into the housing field and who fear the socialization of all housing. Both of the omnibus housing bills were passed by the Senate substantially as submitted but did not reach a vote in the House in 1947.

The Veterans Emergency Housing Program promulgated by Mr. Wyatt did not survive the year 1946. The huge house-production goals for the year were not attained, in part because material production failed to rise to sufficient levels. With the stimulus that the Wyatt program gave to housing starts, the short materials had to be spread over a disproportionate number of building projects, with the result that construction time was greatly extended and completions delayed.³ The hope for a large volume of factory-built homes was not realized in spite of the appearance of hundreds of entrepreneurs. Material shortages, lack of skill and experience, and technical problems were responsible for this disappointing showing. As the volume of house building increased, the pressure for the removal of all governmental controls and stimulants brought about their withdrawal, until by the middle of 1947 the building industry was again operating under conditions of prewar freedom. A concomitant was a rapid rise in costs of construction to nearly double prewar levels. By the end of 1947, the rate of residential building had

³ Woodbury, Coleman, "Objectives and Accomplishments of the Veterans Emergency Housing Program," *American Economic Review, Proceedings*, vol. XXXVII, no. 2, May, 1947.

reached the highest level in history, or a rate about equal to house building in 1925.

Long-term Implications

Our understanding of the postwar crisis in housing would be incomplete without a feeling for the long-term implications. The disturbances in the housing market are significant not alone by reason of discomfort and discontent among the victims but also because of deep and lasting markings that will be left upon our economy. For example, inflationary construction costs, home purchase prices, and land prices not only load disproportionate financial burdens upon the owners at the time of acquisition but also form the bloated base by which the major costs of occupancy are determined for the entire term of ownership. The housing market will not soon shake off the residuum of inflation; costs and prices, once having climbed high, move downward with reluctant step as the pressures are eased. The price structure rarely returns all the way to its previous level. Property tax assessments are already rising in response to market price movements; downward readjustments in assessments are notoriously difficult and slow of accomplishment.

There has been little doubt but that a building boom would ultimately develop. In fact, it has been a national policy, implemented with powerful fertilizers, feverishly to cultivate such a boom in the residential field. Excess subdivision of peripheral lands and disorderly, scattered, and small-scale building operations are inevitable and, in fact, have already begun. It is true that subdivision controls are much more intensive and extensive than at the time of the last land boom in the twenties. But they do not exist, or exist in only a rudimentary form, in the majority of the minor political subdivisions that border our cities, within which the new ring of urban growth will develop. Any hope we may have had for orderly, rational expansion of urban areas, integrated with the basic city structure, is sadly shattered. Instead of controlled, accretal growth through connected and related extensions into contiguous vacant land we shall have scattered, uninhibited development, which will burden our communities with undue costs and with an unnecessarily inefficient structural arrangement of land use.

The danger of a disastrous reaction accompanies every boom. Under great natural and governmentally induced pressures the counterswing toward vast productive activity in house building might gain uncontrollable momentum. The resulting excesses would give birth to a subsequent period of stagnation and loss. From a long-term standpoint, the health of the housing market depends primarily upon stability; yet only instability is in view.

There is a bright side to the building boom in the encouragement that will be given to a rationalization of the house-building industry. With so strong a market demand, large-scale production, with its attendant economies, will be feasible though the benefits may not be immediately passed on to the consumer. The development of new materials and the expansion of the prefabrication industry are to be encouraged as a part of national policy. Already there are intimations that the building industry is on the verge of fundamental evolutions, which are feeding upon the boom.

The extreme housing shortages of the postwar era very likely will leave lasting scars within our social system. There is ample evidence that the crowded and extemporaneous accommodations into which so many families are forced lead to broken families and other forms of social disorganization. The shortage also will result in the postponement of local programs of slum clearance and urban redevelopment. There will be a strong reluctance to demolish any shelter, no matter how squalid; thus the chronic sores of slums must go uncured for still longer, and the rebuilding of our cities must be delayed while we strive to bring the housing market into balance.

New and permanent extensions of governmental participation and controls in the housing market may result, for the present housing crisis presents to all the citizens of the nation a dramatic portrayal of the essentiality of adequate housing. Never before have so many families faced the housing issue so intimately. A natural consequence is a broader acceptance of the need for social controls in the housing market. The emergency measures of Federal, state, and local governments, though they be occasioned by a temporary crisis, may leave a substantial residue of continuing governmental intervention when the crisis has passed.

The Legacies of Prewar Confusion

In the long-time perspective of society, the postwar housing shortage is but a brief interlude of discomfort, which time and man's fumbling efforts will soon alleviate. But there are deeper housing ills that are as old as civilization and have been gathering force in this country in recent decades. Thus, we must include among the disorders of the day in the housing market not only the acute aggravations of the postwar readjustment, but also the chronic ailments of slums and substandard housing, high costs of shelter, inherent market instability, and blighted housing environment. At the expense of some repetition of earlier discussions of housing market history, we shall briefly retell the story of the initiation of governmental participation as a background necessary to an understanding of the present situation.

In the interim between postwar housing shortages of the First and the Second World Wars, the housing market has passed through several phases. First came the building boom of the twenties, culminating in 1925 with the production of 937,000 dwelling units, a level not matched until 1948. In the years between 1925 and 1930, building was brisk but declining, with emphasis shifting from single-family dwellings to multi-family structures, particularly large apartment buildings overfinanced with several layers of mortgage bonds. The evidence that we overbuilt during this era lies in the record of an increasing vacancy rate beginning in 1925 and in the residue of defunct apartment projects, which were not fully reestablished financially and absorbed in some of our larger cities until just before this last war. The period from 1930 to 1935 was the investors' nightmare, with home owners and mortgage lenders losing their shirts along with stock speculators and investors in South American 7 per cent bonds. This was a period of rescue and reform through government in the housing field as well as in many another corner of the economy. In 1932, the Federal Home Loan Bank System was established to facilitate a freer flow of mortgage money, primarily among savings and loan associations. While not originally intended as an emergency measure by its chief promoter, President Herbert Hoover, it was rushed into the gap, unfortunately with no effect in stemming the swelling tide of foreclosures. A fine job of rescue work was performed by the Home Owners' Loan Corporation, set up in 1933, for many a home owner and many a lending institution was saved through its ministrations. In 1934, came the FHA, combining recovery and reform objectives, with the former carrying the greater weight. This agency engaged in the insuring of lending institutions against loss on long-term, high-percentage, low interest-bearing mortgage loans. These three agencies, primarily the last two, were strong influences in the mortgage market and gradually pulled the fat out of the fire; they stimulated the renewed flow of mortgage money and the beginnings of a recovery in the construction industry. The HOLC ceased active operations in 1936 and since then has been in liquidation; the other two agencies are permanent.

During this period of desperate efforts to prime the pump and to vitalize the forces of recovery, the housing reformers got a hand in. Prior to this time in this country, only a handful of socially minded folks had paid any attention to housing conditions, except for some dramatizing of the noisome slums in some of our larger cities. Now someone saw a golden opportunity to provide employment in the construction industry and at the same time provide decent housing for the needy. So there was a succession of attempts, first limited-dividend housing with advances by the Federal government, aimed at but failing to reach low-income groups;

then direct Federal construction of low-rent housing by the Public Works Administration Housing Division; then the Resettlement Administration, with the brave experiment of the green-belt towns; and at the same time, the Farm Security Administration experiment with rural communities for part-time farmers. These efforts were more productive of publicity than they were of housing. And much of the later publicity was unfavorable, playing into the hands of persons who feared socialized housing and who did not like the New Deal anyway.

In 1937, the efforts of the newly coagulated reform group in the housing arena, supported by the need for further stimulants to recovery, led to the passage of the U.S. Housing Act, the public housing bill providing for Federal subsidy to localities for the housing of families of low income. This legislation, and the agency which it authorized, the Public Housing Administration (nee Federal Public Housing Authority, nee U.S. Housing Authority), has been the rallying point for the liberal side in housing. Up until wartime, the U.S. Housing Act was the last major piece of legislation in the housing field. The period from its passage until the fall of 1941 was devoted to carrying out the mandates of the Congress under the three major housing agencies—the Federal Home Loan Bank System, the FHA, and the USHA. Enabling laws were passed in 40 states and in a few cases other state housing legislation was adopted and state housing agencies created. Several hundred local housing authorities were organized primarily to take advantage of the Federal low-rent housing subsidy administered by PHA (USHA).

Thus, in less than 10 years, housing came of age; the Federal government plunged extensively into intervention in the housing market and housing became a recognized social problem in states and localities. But at the same time, this passage through adolescence on the part of the housing movement was accompanied by a sharpening in the differences of opinion on how the problems should best be solved. The lines that were drawn during that stage were, strangely enough, crystallized into a wider separation during the time of war. Since the war the battle has been joined in full fury in the attitudes toward the Wyatt program, toward the omnibus housing bill (General Housing Act of 1946, S. 1592), toward its successor bill, S. 866, the Taft-Ellender-Wagner bill, and toward the housing legislation introduced by the Truman Administration in January, 1949.

Basic Housing Issues

While basic housing issues have been emerging, at the same time basic housing objectives have taken more definite form and, more important, have become generally accepted. The division of opinion with respect

to housing is not based upon antipathetic ends but rather upon ways and means. To be sure, not all persons or groups give equal weight to the various housing objectives, but there is no essential disagreement on the desirability of eliminating substandard housing conditions, reducing housing costs, stabilizing the housing market, and controlling urban blight. There is, of course, a fringe of extremists on both sides—liberals who would like to socialize a goodly segment of the housing supply or reactionaries who would make it a national policy to encourage home ownership to the exclusion of all rental housing.

The basic issue in the housing field is simply that of the extension of public control. On the one hand there are those persons and interest groups who favor a positive public policy of intervention in order to attain those housing objectives which, in the absence of governmental action, have so far eluded us. On the other hand are the individuals and groups who oppose any further invasion of the housing market by government, who urge that the objectives may be reached by continued dependence upon the operations of the private housing market without extension of the existing framework of legal controls, who fear bureaucracy as arbitrary and tyrannical, who view government as a threat to individual freedom, and who, in general, repudiate public responsibility for the curing of social evils and the stabilization of the economy. The issue has been sharply outlined during the debates on the Wyatt Veterans Emergency Housing Program and the public housing features of the Wagner-Ellender-Taft General Housing Act and the T-E-W bill. The subsidy feature of the Wyatt program was opposed because it involved government meddling in the building-material industry but primarily because it was a substitute for the relaxation of price controls. Public housing was opposed because it moves toward the socialization of housing, whereas, it was argued, the elimination of substandard housing conditions can be accomplished by the untrammelled processes of the housing market operating through the filtering-down process.

The extension of social control is not an issue that is limited to the housing field; in fact, it is the fundamental economic issue of the day. Those persons who are willing to accept a greater degree of social control in the interest of reaching worthy goals do not fear a subversion of our essentially individualistic economic order so long as we retain our political and civil liberties. Those persons who resist further governmental intervention in economic affairs generally believe that they are acting to preserve the traditional social structure that has made America great. This belief is evidenced by the labels that they attach to the extension of social control—regimentation, bureaucracy, socialism, and communism.

In addition to the main battle, there are a number of skirmishes in

progress in the housing field. In the field of real estate finance, the FHA and the Federal Home Loan Bank System each has developed a loyal clientele composed of competing groups of lending institutions. The savings and loan associations, which before FHA had a fair monopoly in long-term monthly amortized mortgage loans, have resisted the inroads of banks and mortgage brokers in their field by opposing any extension in FHA operations.

There have been arguments over further changes in interest rates through the FHA and VA mechanisms. The proposal for liberalizing the terms of FHA loans to encourage construction for lower income groups was said to be inflationary by some of the very persons who opposed the establishment of price controls on existing dwellings and building lots. The relaxation of rent control has been another issue. Additional controversies are current about such matters as urban redevelopment, encouragement of new construction for rent, the provision of low-rent housing through rehabilitation and conversion, prefabrication, and building codes. Federal appropriations for housing research have been opposed by the building industry. But the main issue should not be obscured, for at the bottom of all these side issues lies the question of the encroachment of government on the preserves of private enterprise.

All the pulling and hauling in the housing arena is most confusing to the unsophisticated. The sweeping statements emanating from both sides do not always ring true, even to the uninitiated. Arguments seem to reflect ideological attitudes rather than logic. Specious lines of reasoning appear in the solemn garb of scientific truths. The emotionally violent attacks and counterattacks leave the spectator dizzy and helpless. Among all those who are vocal on housing subjects, there are few who do not speak in the espousal of a program, the defense of a formula, or the expression of a political philosophy. Thus, as we view the housing field in the postwar era, we are presented not alone with an admixture of war-spawned imbalances and chronic maladies but also with a brew of underlying antagonisms and differences, first mixed in the thirties, then sharpened by wartime aging, and now more potent than ever.

Housing Objectives

The central housing problem was ably stated in 1935 by Ernest Fisher: "From the broad social point of view, the 'problem' consists in securing for every family facilities which will promote the health, safety, morals, and general welfare of the occupants at a price the occupants can afford to pay."⁴ The definition might have recognized more specifically the

⁴ Fisher, Ernest M., "The Housing Problem," *Michigan Alumnus*, vol. XL, no. 25, July, 1934.

dynamic and elusive nature of this underlying objective, for this is an end that can never be attained. In the field of housing, as in every other field that affects human welfare, society continues to set higher objectives as the earlier goals are reached; the "general welfare" has no effective upper limit. The point has already been made that society is generally agreed on central housing objectives. True, there are differences in the feeling of urgency, in definition of scope for each objective, and in willingness to meet the costs of attaining the objectives; but the fundamental differences of opinion relate to ways and means.

If all housing objectives could be attained without difficulty, there would be no housing problems. The problems, then, are the difficulties in meeting the objectives. This complementary relationship of problem and objective suggests that the starting point in a discussion of housing problems should be a statement of housing objectives. Now it is possible to identify a variety of focal points of attack in the housing field of battle, objectives that must be reached or campaigns that must be prosecuted in the fight for victory. The complex interrelationships within the housing market framework make all objectives interrelated and to some extent overlapping; but there are a number of separate foci of thought and action. There are five such housing objectives, which together seem to cover the housing field and the attainment of which would give us a complete housing victory.

1. Abatement of the chronic maladjustments between demand and supply in the housing market. Instability is lack of balance; it is this characteristic of the housing market that is the source of many of our more serious housing ills. The market mechanism has been notoriously unsuccessful in bringing about a reasonably close adjustment between the supply of housing and the need for it at any given time. The rate of house production is rarely adjusted to the increase in demand; the industry is either trying to catch up with demand or it is overproducing. Thus we move from surplus to shortage in the housing market, with no pausing at the point of balance. The housing market has failed, in comparison with market processes involving many other commodities, in effecting a satisfactory distribution of housing relative to the needs of society in terms of location, size of dwelling, type of accommodation, tenure, price, and rent.

2. Reduction in the cost of shelter. The reduction of housing costs, like stabilizing the housing market, will redound to the benefit of the whole of society, regardless of social and economic status. It will raise the general standard of living. There are many costs comprising the total of shelter costs, and thus there is a wide variety of curative action that might be taken. The attack must be on the waste, inefficiency, and uncertainty that create unjustified costs.

3. Elimination of substandard housing conditions. The existence of antisocial housing conditions is a manifestation of market imbalance as tested against the

standards of present-day society. Thus, the market machinery has failed, for whatever reason, to provide socially acceptable accommodations for a large segment of the population. This objective is properly a part of objective 1, but the maladjustment is so severe and so costly that special attention and special treatment are warranted.

4. Improvement of housing environment. The term "housing" connotes not alone the housing structure and its facilities but also the environment of the structure. The house is the focus of a complex of external physical, social, and economic forces that may have their origins at a considerable distance from the site. Families live not alone in the house, but also in the neighborhood; and the relationships with other people, with the physical features of the landscape, and with places of employment, recreation, and worship are significant qualities of housing. The slums and blighted areas of our great cities stand in bleak testimony to the necessity for the improvement of environmental influences through the exercise of the police power, through city planning, urban redevelopment, and neighborhood conservation.

5. Improvement of the structural amenities of housing. We must never stop in our progress toward dwellings that provide better and better amenities. Design must be constantly improved and adapted to changing technology and changing social customs. New materials and new items of equipment and new methods of construction should make our dwellings progressively more efficient and more comfortable.

Progress along all of the five lines listed here is necessary if society is to move in the direction of the underlying housing objective of decent housing within the price reach of all families. It is the first three of the listed objectives that are the subject matter of this discussion. The others are omitted not by reason of a lack of importance, but because the problems and the cures fall less completely within the realm of economics. Instability, cost, and substandard housing are socioeconomic problems quite different in implication from problems of design and technology. The problems of environment fall somewhere in between, for they are social and economic as well as technical. Many aspects of the problems of housing environment will be touched upon in the discussion of costs, market instability, and substandard housing; the previous chapter has considered certain control devices that aim at the betterment of environmental conditions.

This statement of housing objectives shows clearly how universal and pervasive throughout our society is the impact of housing reform. As we move toward each one of the central goals, there are few groups, regardless of economic station, that will not receive benefits in large measure. The elimination of antisocial, substandard housing conditions has its justification in the abatement of costs and social dangers to the community as a whole and in the ultimate strengthening of society

through the beneficent influences of good housing on the new generations. Reduced costs of shelter will constitute a rise in the standard of living for all. A stable, adjusted housing market assures a sufficient supply of shelter appropriate to the needs of all groups and will contribute greatly to a general reduction in housing costs as well as to the stability of the economy as a whole. The preservation and improvement of the housing environment will contribute to the general welfare, and advances in design and techniques of construction that enhance the beauty and utility of living units will make this world a better place for all segments of society.

Another underlying truth that is emphasized by the character of the housing objectives is that our most serious housing troubles are basically economic in nature. It is true that the objectives of housing reform are broadly social, but the mechanisms of reform and adjustment are economic. The fact is that the housing market, which is an economic thing, has failed to provide for our housing needs in terms of adequate quantity, appropriate quality, and proper timing. The forces of housing demand and supply, operating within the institutional framework of the market, have produced a result that apparently is less than society demands. If it were not so, we should not need to discuss the subject at all. Now it follows that if we cannot depend upon the undirected forces of the market to provide enough of the proper kind of housing at the right time, the first step is to diagnose the reasons for such failure. A diagnosis of housing market troubles clearly calls for the use of principles that fall within the discipline of economics. Again, if the ills of housing are economic in nature and if a specific is required, the cure necessarily involves some tampering with economic forces, with the market factors, or with the institutional framework within which the market factors are operative.

We shall never finally solve all our housing problems. The dynamics of society—institutional change, technological development, social evolution—impinging upon the rigidities of the urban land use pattern and the relative permanence of land improvements will never cease the breeding of new problems. We shall expect that socially accepted housing standards, as in the case of other living standards, will always push ahead of accomplishment. We shall have to develop a flexible, adaptable approach, so that continuous adjustments may be made. There can be no doubt that this end may be accomplished without departing from the established system of capitalism in this country if we adopt the view point of Eric A. Johnston, former president of the Chamber of Commerce of the United States: "The new and progressive view holds that capitalism is a human institution, vibrant and evolu-

tionary, capable constantly of adjusting itself to new conditions, a tool in the hands of the people to be used for the good of all.”⁵

This chapter and the following chapter are organized about three basic housing objectives, which have been selected for consideration—the stabilization of the housing market, the reduction of housing costs, and the elimination of substandard housing conditions. These three objectives will be attained only as a result of changes in the processes of the housing market, either through natural evolutionary adjustments or by means of changes in the institutional framework of the market induced by governmental action. The discussion will attempt to evaluate, in the light of economic principles, the various remedies that have been proposed. We shall be concerned with the mechanics of the market, with cause and effect. Though our analysis may indicate that the attainment of certain housing objectives can be facilitated by governmental action, such a conclusion is not to be construed as endorsement of such action. The social values involved in the administering of housing cures that call for the extension of governmental controls must be weighed by each individual on the basis of considerations that are far broader than the housing field.

PART II. THE CONTROL OF INSTABILITY

In an earlier chapter, the nature of instability in the housing market was considered.⁶ Instability is manifested in the notoriously wide swings in the cyclical movements of house production, sales activity, real estate prices, and rents. Internal imbalance is evidenced by the failure of the market to provide a sufficient but not excessive supply of housing at all quality and price levels within the range of family needs and capacities to pay. The results of this internal instability are found in the chronic and extensive occupancy of substandard, antisocial housing and in the unnatural housing state of many families in dwellings that are badly fitted to their needs, inadequate in quality, or too high in cost in relation to income.

The primary social costs of the instability of the housing market and the chronic imbalances are borne by the consumers. It will be demonstrated in a later section that instability is a contributor to the costs

⁵ “The New Capitalism: Opportunity for All,” condensed from the farewell address by Eric A. Johnston, *Reader's Digest*, August, 1946.

⁶ Chapter 11, The Housing Market. (See pp. 334-345.)

of shelter and that, through a variety of processes, stability would reduce housing costs. Finally, home owners, investors, and lenders on housing security suffer from the extreme market fluctuations, which endanger and often wipe out their financial interests.

There are forces outside of the housing market—notably general business conditions—that are often responsible for the irregularities that occur. In this discussion, however, we must restrict our analysis to the factors, forces, and processes of the housing market itself. With this reservation, we may generalize by saying that the cause of the unstable and unbalanced nature of the housing market is the lack of sensitivity of the self-regulating mechanism, *i.e.*, the imperfections of the market.

Modifying the Imperfections

In this chapter and in earlier chapters we have outlined the major market imperfections and the primary manifestations of imbalance and instability. We have seen that the essential nature of housing demand is changeability; that the nature of housing supply is rigidity. The exchange processes in the market have been characterized as inefficient and slow; the very nature of the commodity militates against sensitivity of reaction in the market. It is clear that any improvement in the effectiveness of the self-regulating mechanism of the housing market must have its origins in some change in the nature of the commodity, a reduction in the extent of social intervention through law and regulation, the sensitizing of market reactions, stabilization of demand, or increased flexibility of supply.

Changing the Commodity. During the next decade we shall see the beginnings of changes in the physical aspects of housing structures, which will contribute to housing market stability. Housing will not become less complex in terms of services; to the contrary, the increasing mechanization of dwellings increases their complexity and their mystery. But with the development of new materials and techniques, the structure may be simplified. Most important of all in the interests of market stability, housing may become more standardized. The prefabrication of standard models is already here. The spread of large-scale building operations employing site-fabrication techniques will increase the comparability of houses. As greater quality controls are more widely imposed through building codes, the lending policies of financial institutions and the regulations enforced by governmental agencies such as FHA, individual differences among housing structures will be reduced.

Another trend that is already in evidence is that toward greater flexibility in size and in space arrangement. An increasing number of houses will be built with a view to future expansion and rearrange-

ment of space as the family increases in size and to ultimate contraction to fit the needs of the old couple when the children have gone. There are those who dream of a truly demountable structure, which can be traded in for a new model, moved from the lot to make room for the new house, and sold off secondhand for reerection in some other neighborhood to serve a lower income group.

Although standardization and flexibility in housing structures will contribute to market stability, we may expect only slow improvement in market sensitivity from this source. The changes will spread slowly, and it will be many years before a significant proportion of our housing stock can possess these characteristics.

Relaxing Institutional Limitations. There is little prospect that there will soon, if ever, be a reversal of the long-term trend toward broader social control over land use. Recent decades have brought an increasing awareness of the need for regulating land development and construction in the interests of the community as a whole. It is probable that land held in public ownership will increase in proportion as local governmental activities expand and as recreational facilities are extended. The limitations on private ownership that are exercised through the power of taxation are not destined for any immediate change. In spite of much agitation to shift the burden of local government away from real estate, no satisfactory alternative has been developed. Schemes such as the local income or pay-roll tax will turn out to be merely schemes for keeping real estate taxes from going higher, rather than for substantially reducing them.

The evolution of social thought in the last 50 years suggests the probability that, over the long run, through legislation and court decision, we shall continue to modify the institution of property, ever moving closer to the point where real property will have a public-utility status and where private ownership will be more circumscribed than it is today. We shall move, then, not toward a freer market but toward greater restrictions on individual freedom of action in the use of land. However, the relaxation of police-power controls would contribute little to market stability in the end, for without use zoning and quality controls on structures, there would be greater uncertainty in the market, and uncertainty breeds instability. The power of eminent domain implies a constant threat of condemnation, but better city planning permits the forecasting of future public areas and the generous court awards in condemnation suits serve to assure property owners that public purchase or condemnation will not cause them loss. Taxes on housing do not constitute a particular obstacle to the free interplay of market forces so long as the levies are equitable and reasonably predictable.

Sensitizing Supply. If supply could be more expeditiously adjusted to changes in demand, much of the chronic and recurring market imbalance could be avoided. It has already been suggested that there is little immediate encouragement in recent changes in house design and building techniques. Structurally, the bulk of the housing stock will remain for many years to come about as it has been. Furthermore, there is no evidence that in the near future housing will be removed from the market more rapidly than in the past. It is possible that some new technique of construction may appear, that costs will be substantially reduced, and that values on existing housing may fall drastically as a consequence. Under such conditions, assuming that taxes and operating costs did not fall proportionately, there would be a substantial clearing out of housing that failed to produce a net return, and, after the major adjustment had been made, a tendency for housing to be removed before it reached the low level of quality that it is permitted to reach today before removal. If houses were built for shorter life, flexibility of supply would be enhanced, for it would not take so many years to effect qualitative changes in the basic housing stock.

The failure of the building industry to respond with dispatch to changing demand pressures has prolonged shortages and created surpluses. At times, the lack of sensitiveness to demand has resulted in building housing of a type that was ill fitted to long-term market needs. The unusually long life of housing structures suggests that house production should be planned not alone for the current, short-term demands of the market, but for maximum usefulness over the entire life of the housing. To some extent such planning is done in the case of rental housing, but, because of the nature of the building industry, foresight in planning is less characteristic of the production of single-family homes. The builder is a manufacturer and not an investor. He looks to quick sale, and, under present plans of financing, retains no interest in the house he builds. As a result he builds for salability, for the demand of the moment, and often has little concern with the fact that his product will remain as part of the housing supply for 40 to 100 years. Only a market analysis that forecasts the nature of future demand can guide production for the greatest long-term social benefit. If home buyers could be educated to give more weight to resale value when considering a purchase, builders might be induced to design their product with more thought to future utility. Buyers should have real concern with securing a maximum recovery of their investment in a home, since the average term of ownership is short and the probability of future resale is high. Mortgage lenders are in a strategic position to exert control; theirs is a long-term interest, which justifies emphasis on future value. Intelli-

gent mortgage risk analysis is becoming more widespread and offers much hope as an influence toward better home design.

The major hope that has so far been proposed here is that better market information more widely disseminated will tend to guide the production of housing into a more rational pattern. As more market information becomes available, its effectiveness will depend upon the intelligence with which it is applied and the adjustability of the industry to the findings of market analysis. Present trends hold some hope that the rationalization of the house-building industry has begun.

Rationalizing the Building Industry. The nature of house production was discussed in an earlier chapter. Although there is still much to learn about the operations of the building industry, its important characteristics have been clearly isolated by long observation and illuminated in recent writings and studies.⁷ In addition to lack of information, the sluggish and imperfect response of the house-building industry to demand forces is the result of the organization of the industry in small production units, the general lack of managerial ability, the absence of centralized control of the building operation, the inefficient and monopolistic system of material distribution, and the obstacles and irrationalities created by the building trades through apprenticeship regulation, limitations on output and on new materials and methods, and, finally, jurisdictional disputes. Clearly, a reduction in housing market rigidities would result from a rationalization of the industry, a rise in the standard of managerial ability, and an increase in the size of the productive unit; these improvements would enhance the ability of the industry to react to demand changes—to get production under way more promptly, to halt production before surpluses are created, and to adjust more quickly to the shifting quality of demand.

The short space devoted to this point belies its importance, but the subject is too broad to be covered adequately here. The detail is available elsewhere; the application to the problem of stabilizing the housing market is clear. To a very considerable degree indeed, the failure of the housing market process to yield satisfactory results is due to the imperfections of the building industry. The curative measures are manifold, sufficiently complex to be the subject of a volume. We may conclude that any moves toward greater rationalization of the building industry are steps toward general housing market stability.

Stabilizing Demand. Demand is the most active reagent in creating instability. The ebb and flow of demand forces and the underlying

⁷ Colean, Miles L., *American Housing* (New York: The Twentieth Century Fund, Inc., 1944).

long-term trends in the quantity and quality of demand reacting on the relatively static forces of supply bring about the frequent and wide fluctuations that are characteristic of the housing market. If the changes on the demand side were less frequent and more moderate the forces of supply would have time, sluggish though they be, to achieve a closer adjustment than has been the case in the past.

There is not a great deal to be done toward modifying the forces of demand. To a large degree, these forces are set in motion by basic social and economic forces and by technological change. There is not much to be done about the migrations of wartime, nor could there be any control over the population shifts that might be brought about by the application of atomic energy to industrial uses. The changing pattern in the value systems of social groups may profoundly change the nature of housing demand, but there is no practical or acceptable device for controlling the social mind. The variant economic health of the nation is a force of great power in its effect on housing demand. Certainly, valiant efforts are made to avoid the maladies of depression, but such considerations take us some distance from the immediate problems of the housing market.

One of the most effective methods for contributing to the stability of the housing market is to improve the flow of information among the traders in the market. Prospective consumers must know more about the offerings in the market, about recent transactions, about construction costs, and about trends on both the demand and supply side. Prospective sellers and producers must be informed on all the same points, with particular emphasis on the facts with respect to demand. A freer flow of market information will not cure all the market imperfections, but, within limits, it will help to direct production to the points where supply is most urgently needed, to check production before too great a surplus is created, to rationalize the relationship between market price and cost of production, and to reduce the spread of market prices for housing of similar facilities. Certainty is the greatest of market stabilizers. Certainty depends on predictability. And, in most areas of economic activity, prediction must depend mainly upon an analysis of recent trends and present market facts. Not only must the market facts be known, but they must be understood in order that their interpretation may be useful.

It has already been suggested that one road to better market information is by way of standardizing the commodity but that there is little prospect of a significant change in this direction for some time to come. However, there are many things that could be done to provide

and disseminate housing market information. In recent years, housing statistics on a national basis have increased greatly in coverage and certain data on a local basis are available in many of our larger cities. These activities must be greatly expanded in both coverage and intensity. Every local housing market should be thoroughly analyzed, and all basic housing market data should be regularly collected and published.

It is difficult to induce the occasional trader in the market, the prospective home owner, or the small property owner to seek and pay for professional advice. The housing market is superficially familiar to all who own or rent dwellings; we all quickly become market experts and develop a dangerous dependence upon our own poorly informed judgment.

However, the extension of professional advice to the typically inexperienced traders in the housing market is an important device for rationalizing market decisions. The Realtor, the appraiser, and the mortgage lender occupy strategic positions for rendering this service. But professional advice implies a professional training and an understanding that many of these persons in strategic positions do not possess. Furthermore, there is need for a great deal of research to provide a sounder understanding of market relationships. The housing business cannot become professionalized without a larger body of knowledge than now exists, without a more extensive literature, without better educational facilities, and without higher professional standards of training.

Stability through Social Control

The inherent instability of the housing market is the direct reflection of the underlying imperfections that interfere with the self-regulating mechanism. The nature of the commodity, the lack of flexibility of supply, the variability of demand, the lack of informed traders, and the institutional limitations that surround transactions—these are the departures from classical perfection that are in large part responsible for the wide swings in activity, the violent price fluctuations, and the failure of the market to meet the housing needs of all groups. There is no dependable evidence that the housing market is growing either more or less stable. The indications are mixed. For example, we might expect that in a maturing economy and with population approaching stabilization, the markets for all commodities, including housing, would become more predictable and hence less variable. Furthermore, there is movement toward an increasing rationalization of the building industry and toward greater standardization of its products. On the other hand, we are in an era of rapid technological change, when discoveries and developments have profound social and economic repercussions. Population

may be stabilizing quantitatively, but not geographically, socially, or politically. We may look forward during the next few years to many significant changes in basic forces of housing demand and supply, and change is antithetical to stability.

We are sound in assuming that direction and stability in the housing market are socially desirable, other things being equal. There seem to be the usual two choices that confront society in its attempts to solve almost any economic problem—more or less social control. If the housing market is imperfect, then the solutions are either (1) to abate the imperfections, thus giving freer play to the natural market forces of adjustment, or (2) to offset the imperfections of the market by artificial incentives and restrictions administered by government. In an earlier part of this chapter we concluded that there was little likelihood of removal or reduction in those social controls over land use which constitute the institution of private property as presently formed. We are now to look at those more positive social controls which are designed to influence the quantity or quality of construction or the price of the product.

Stabilizing Prices. Rent control during and after the war provides an illustration of an artificial restriction on price, which proved to be effective in preventing inflation. In its normal operations, the FHA exercises a species of price control by appraising properties on which insured loans are sought and by limiting loans to a maximum statutory percentage of the estimated value. FHA also exercises some control over the rental schedule in rental projects financed by an insured mortgage. But the FHA controls are mild and indirect; their influence is limited in strength by the relatively small share of the housing supply that is financed by FHA-insured loans. There is little evidence that the indirect control of housing prices through the financing mechanism can prevent runaway inflation. The skyrocketing prices of homes after the war demonstrated the futility of such devices.

In time of extreme shortage, when families are desperate for shelter, no plan but direct price control can keep prices stable. The refusal of the Congress to impose controls on prices of existing houses in the face of admittedly extreme inflation indicates that direct price control is politically unpopular. At the bottom of a depression, with vacancies high and property owners financially distressed, there is nothing that can prevent the dumping of dwellings on the market except the kind of direct support to the market that was provided by HOLC in the period from 1933 to 1935. But there is a wide zone between the extremes of inflation and distress in which price stability may be increased by the simple device of providing better market information. To inform the

traders in the market of basic market trends in demand and supply and in prices and rents and to acquaint them with changes in the costs of construction and the relationships between reproduction costs and market prices would exercise a strongly stabilizing influence.

Controlling Production. With few exceptions, governmental controls in the housing field have been employed as stimulants which are to increase and to guide production. Price controls except during war emergency have been indirect and incidental. Devices for inhibiting overproduction are rarely considered and would be politically unpopular. Thus during the depression, the Federal Home Loan Bank System and FHA were established to a large extent for the purpose of reviving the construction industry. The FHA was eventually effective but the FHLBS made very little contribution to recovery. Directional or selective stimulation has also been attempted. The original FHA rental housing provisions were designed to encourage the investment in this type of shelter but cannot be counted as very successful. Under the 1938 amendments the extra-liberal financing terms permitted for homes under \$6,000 in value were to encourage small-house building; home ownership was made easier for families of modest income and it is probable that substantially more small homes were built than would otherwise have been the case. During and after the war, Title VI FHA financing was designed to stimulate the production of modest dwellings for warworkers and veterans. In the General Housing Act and the National Housing Commission Act, considered but not passed by the Seventy-ninth and Eightieth Congresses, there were provisions aimed at stimulating rental housing at low rents, cooperative housing, and public low-rent housing without subsidy. So far, peacetime stimulants have demonstrated only modest accomplishments both in effecting directional control of production and in stimulating a general increase in housing construction. The problem of checking excessive production has not been faced, but it would be politically difficult for a governmental agency to attempt to put brakes on an active and profitable market, even though underlying facts should indicate that an oversupply were developing.

Stabilization through Mortgage Credit

In the earlier chapters on real estate finance the two major Federal agencies in the field of mortgage credit were described. These two, FHA and the FHLBS and other related agencies, were established with the dual objectives of recovery and long-range reform. Both agencies, in varying degree, have contributed to a freer flow of credit, to more liberal terms for the borrower, and to better mortgage risk analysis and sounder lending practices. The freer extension of credit to the borrower

and the credit pool for the lenders are devices that aid the readjustments of the market on the upswing when stimulants are needed. However, if not properly controlled, these facilities can abet overproduction and inflation. The point has already been made that it is politically difficult for a governmental agency to put on the economic brakes.

Better mortgage risk analysis and lending practices are a stabilizing influence of long-run importance. When loans are properly fitted to the security and to the borrower's financial capacities, losses are reduced and deflationary forces are diminished. In boom times, the tendency to overloan is less strong if the risk factors are more fully understood; during depressions, the temporary prostration and pessimism of the moment are more likely to be discounted.

Stabilization through Understanding

In the long run, the soundest approach to balanced production of housing is by way of the release of natural market forces through broadened knowledge and understanding. Our system is inherently capable of filling the needs of those who can afford to pay a reasonable price. Thus rental housing will be built when it is accepted as a promising speculation or a sound investment. Under the abnormal conditions of the postwar period, it is neither, for inflated construction costs are not likely to rise much further and the high level of rents that is necessary to produce a reasonable return on present high construction costs is well above a future normal expectancy. With all restrictions on rents removed, there will be some additional rental housing built in the expectation that the high rents permitted by the housing shortage will last long enough to offset the lower levels of later years.

The growing interest of institutional investors in rental housing as an outlet for funds is an example of the effectiveness of information as a directional control. The FHA must be credited with opening the eyes of lenders to the inherent security of well-planned apartment properties for upper-middle-income occupants. We need to develop a further understanding of investment risk factors, to extend the collection of local market facts, and to perfect techniques of local market analysis and forecasting. Statistical series on a national basis are of limited usefulness, and, in fact, can be misleading if applied unqualifiedly to local situations. With better information and understanding, the natural forces of the local markets will be released from the bonds of uncertainty and ignorance. Builders and lenders will become aware of local housing needs not now fully recognized and can more nearly measure future demand. In time, the present hand-to-mouth method of operation of builders, where quick salability is the only criterion for production

decisions, may be replaced by a more scientific approach, which will reveal all market needs and allow the scheduling of production well into the future. When needs and profit possibilities are more fully exposed to entrepreneurs and investors, the natural forces of market adjustment will match production and basic demand much more closely than today.

One of the most dangerous threats to economic stability is that of overproduction of housing. As the burgeoning building boom gathers momentum, it may well roll on past the balance point, as it did in the twenties, and leave us with an aftermath of deflation and ruin. There is no counting on governmental agencies effectively to check overproduction by law or regulation. The only dependable inhibitor is information—the assembling and dissemination of honest market facts on a local basis. The knowledge that overbuilding is threatened will at the least indicate caution to the agencies in the production process—the builders who are planning next moves, the subdividers who will not wish to be stuck with vacant land to carry, the lenders who have a long-term interest in the housing market, the building-material dealers who may hesitate to extend credit in face of falling demand, the municipalities who are asked to extend utility lines. Thus the sensitivity of the housing market can be greatly enhanced simply by uncovering and publicizing the market facts. For the most part, rational market decisions may be expected when the facts are known; the past history of house building suggests that many components of the building industry have been operating in murky unenlightenment. We may expect that intelligent scheduling of housing production will increase as the building industry is rationalized, as producing units increase in size, as managerial skill increases, and as market analysis is more frequently used to guide production planning.

Conclusions on Instability

The lack of balance and stability in the housing market reflects serious imperfections in the self-regulating mechanism. Stability must be sought through the modification of these imperfections and the resultant freeing of the natural forces of adjustment. The dead hand of monopoly must be lifted wherever it lies heavily upon the building industry; anti-trust laws should be enforced and all obstacles to free competition removed. Among the institutional bars to free reaction are the archaic building codes and the restrictive practices of building trades unions. In the long run, the housing market cannot be stabilized by government fiat short of complete socialization of the economy. Selective production stimulants will be effective only when they enforce natural market

tendencies, though they may have value in accelerating sluggish tendencies in time of emergency.

The greatest potential for the release of market forces lies in the spread of understanding and information. The sensitivity of the market will increase as the traders and producers gain in appreciation of fundamental economic principles and as there are available to them more current market facts on a local basis. If those individuals who make and who influence the critical market decisions—the home buyers and renters, the home sellers and landlords, the land developers and builders, the appraisers, the brokers, and the mortgage lenders—were all possessed of dependable knowledge of basic market trends and were equipped to interpret and apply this knowledge, market forces would be far more sensitive to change, and market adjustments would be greatly speeded.

The use of information as a control device calls for the coordinated functioning of government, educational institutions, and trade groups. There is need for basic research in housing economics by universities and governmental agencies to increase our knowledge of fundamental principles. The education of practitioners and of a new generation of professionals must go forward. The collection of basic market statistics must be extended to cover every local housing market, and each local market must be subjected to continuing market analysis by persons who are trained in these techniques. The collection and dissemination of market data is an activity in which local and Federal governments can take the lead with propriety and with full citizen support. Universities must assume the responsibility for basic research and for training. And the traders and practitioners in the market must be educated to utilize market information in determining on bids, offers, and production schedules.

PART III. REDUCING THE COSTS OF SHELTER

There are very few housing ailments that would not show improvement if the costs of shelter were reduced. We might say with equal validity that a general rise in the level of income would solve many if not all of our housing problems. But because this discussion is a study of housing rather than income, we shall assume that the level of income remains constant. Certainly, lowered costs would greatly facilitate an approach to the central housing objective of "securing for every

family facilities which will promote the health, safety, morals, and general welfare of the occupants at a price the occupants can afford to pay." By reduction in cost is meant reduction relative to other elements in the cost structure of the economy, relative to family incomes, and relative to the quality of housing.

It is a popular truism to say that housing costs are "too high." For purposes of this discussion we may say that costs are too high if they reflect economic maladjustments or if they are inflated by waste and inefficiency. In a very practical sense, housing costs are too high only if there is something that can be done to lower them. We must recognize from the start that the basic cost of housing simply reflects the fact that a house is a large and very complex structure and thus is inherently costly. The cost is too high only if costs have been inflated by market imbalances or by unjustified waste. The only costs worthy of our attention are those costs which are subject to reduction by the conscious efforts of man in his attempts to increase productive efficiency, rationalize the economy, and minimize uncertainties.

Significance of Housing Costs

In light of the huge annual investment in new housing and the large share of the national income that goes to provide shelter, it is obvious that even a very small saving per dwelling unit would have a very large aggregate effect. The release of huge sums by reason of net social savings in any of the housing costs could have great influence on the national economy. For example, if the estimates of new house construction after the war of around a million units per year are attained, the annual saving resulting in a 20 per cent decrease in construction costs would be well over a billion dollars in original cost plus substantial annual savings to the owners during the entire life of the property in interest, insurance premiums, taxes, and depreciation. A saving of one-fifth in the 12 billion dollars of annual consumer expenditures for housing would amount to 2.4 billion dollars.⁸ Other things being equal, a diminution of housing costs will enable the occupants to command better housing or will lighten the financial burden of supporting housing of the same quality that they now occupy. In either event, there will ensue a rise in the standard of living for those families which are affected. Reduced housing costs will, at the same time, tend to lower three of the significant limits or margins that exist within the housing market—the point at which home ownership becomes financially feasible; the level at which new housing is in-

⁸Dewhurst, J. Frederic, and Associates, *America's Needs and Resources* (New York: The Twentieth Century Fund, Inc., 1947), p. 148.

troduced into the market and thus the income level at which new housing is a practicable alternative to used housing; and, finally, the level at which housing of minimum quality may be secured.

There are significant differences in the market repercussions that result from changes in the different classes of costs. Costs cannot be conveniently lumped together and discussed as if they were homogeneous in all important aspects; for housing costs vary in their origins, in their susceptibility of reduction, and in the market reactions to changes in their levels. We must not overlook the fact that housing is only one aspect of living and that the standard of living of a family is determined only in part by the quality of its dwelling. Nor will savings in housing costs necessarily be reflected in better housing for the families benefited. The purchasing power released by reduced costs of shelter may find its way into any of the multitude of channels of alternative expenditure—into savings, into luxuries, into other necessities that have not been up to a reasonable standard. Housing will receive no more than its share of the gain. But whether or not housing is affected, the general standard of living will be raised and a social benefit may be assumed.

The ultimate effect on housing quality of changes in housing costs is conditioned by the interactions of a complex of factors, which may be grouped into the following four categories: housing costs; family income; costs of all other goods and services not connected with housing; and the pattern of the relative values that the family places on all alternative goods and services. In our analysis of the effects of changes in housing costs, we shall assume that the other three of these factors are held constant—that incomes remain unchanged, that the general price level holds steady, and that individual and family scales of values for all goods and services in relation to available income are unaltered. Actually, of course, these factors are in a state of constant flux. Prices of all goods including housing are perpetually shifting. Family incomes rise and fall and family situations are altered so that the demands on family resources are subject to continuous change. New products and services appear in the market to compete for a share of family income. Advertising, education, and the many social and cultural forces are forever at work to vary the individual value systems upon which basic choices are made.

The decisions that families make with respect to the quality of housing are mainly conditioned by the specific and foreseeable cash requirements of occupancy. Thus, in many respects, cash outlays are more important as conditioners of housing behavior than true housing costs, but it is not to be concluded that these outlays are of greater social significance than costs. In the short run, the immediate cash requirements of oc-

cupancy do, it is true, determine for most families the current quality of their housing and establish the balance of income that is used for other aspects of living. But the time dimension in the evaluation of the standard of living must not be ignored or foreshortened. The most significant social fact is the standard of living over the entire term of the family's existence. Costs, by definition, are finally realized in a financial transaction. Thus if certain costs are not recognized by setting up reserves during the period in which they accrue, they will be met later out of current income when specific bills must be paid. If items of upkeep are permanently neglected, the financial burden of the neglect will finally bear upon the owner when he tries to dispose of the property. On the other side, amortization of debt is not a real cost but rather goes to increasing the net worth of the owner. There is no escaping costs, and the standard of living of the family over time will inevitably reflect the true cost of their housing though the effect of some of the costs be greatly delayed.

Cost Defined

In much of the literature of housing, the use of the term "cost" is loose and unrefined. Since we are here to deal with the economic aspects of housing costs, it will be necessary first to define our terms with some precision. As a general definition, we may say that housing costs are those financial burdens which are associated with the provision of shelter and which bear upon the income of the owner or occupant or diminish his net worth.

The costs incident to acquiring of a property and to putting it into working condition, which are capitalized to establish the original asset value of the property, form one natural grouping for discussion and analysis. These costs include the costs of production where the property is newly built and the purchase price where the housing is acquired from another owner. The costs of working capital tied up during the construction process and the initial costs of the permanent financing fall in this category. Costs incident to the conveyance of title are also included, and, in the case of a property sold by an operative builder, the seller's profit and sales costs such as commissions must be accounted for.

Financial costs or costs of money are limited to the interest charge on invested capital, since interest on working capital and the initial costs of borrowing are included among the capitalized costs. Invested capital includes both borrowed funds and the owner's capital tied up in the property in the form of an equity.

Operating expenses reflect those costs which are necessary to keep the property in proper physical condition and those periodic charges which

must be met in order that the property may continue to render the full complement of housing services. This category includes such costs as taxes, heat, utility, services, water rents, garbage collection, waste removal, insurance, upkeep, repair, and replacement. These charges are met directly by the owner occupant and in the case of a rented property are usually divided in various ways between landlord and tenant, depending upon local custom and contractual arrangement.

Loss in value or depreciation is a cost of housing that is often overlooked, particularly by home owners. This cost is not actually realized until the property is sold or demolished as worthless; but sound business policy calls for estimating the rate of depreciation and making a periodic charge to cover accrued depreciation. Loss in value arises from a complex of causes—physical deterioration, obsolescence, changing environment, and fluctuations in the housing market.

Sales prices of used houses and rents are market prices. Sales prices are important factors in determining both capital and operating costs, but there are wide fluctuations in this relationship as a result of other market forces.

It is an elementary accounting concept that cost and the outlay of cash are not necessarily the same. It is true that costs are not finally realized until they are given substance in some financial transaction; but cash payments made for various purposes do not necessarily correspond in either time or amount with costs that are properly chargeable to the accounting period when the payment is made. In some cases, such as the amortization of debt, the cash payment is not a cost at all. Depreciation is a real cost, which is not represented by a cash outlay; loss in value is not actually realized until the asset is disposed of and, in financial terms, represents the evaporation of value of an asset rather than a cash expenditure. Imputed interest on equity is another cost that has no cash expression. In the case of prepaid expenses, the financial transaction precedes the period when the cost is truly chargeable. In the case of the replacement of items of equipment, the cash outlay occurs at the end of the period during which depreciation is properly chargeable as a cost. In the simplest terms, then, costs may be considered as financial obligations, which, when realized, reduce income without increasing assets or decrease assets without adding to income.

The final burden of many of the items of housing cost is determined in part by the nature and amount of other cost elements. Thus, savings in capital costs from the use of shoddy materials and cheap construction will call for increased maintenance in later years and may result in accelerated depreciation. Inadequate expenditures for repair and maintenance will lead to extra costs in the future. Low taxes such as

are sometimes found in suburban areas are likely to be offset by costs incurred in providing the services that are available within the central city and covered in the city tax bill.

Differential Importance of Costs

What are the important costs of shelter? Certainly any attempts to effect cost reductions should be directed at the costs that constitute the major burdens, although the susceptibility to reduction of the several types of cost should also be a guide to action. A few illustrations will serve to demonstrate that the initial capital cost and the cost of money are the two most significant categories. When the cash outlay basis is used, capital cost and debt service are the most important of all outlays.

Let us assume that a new house has been purchased for a total capital cost or investment of \$5,000. What would be the annual costs of owning this home, including all the real costs, even though some of these are not always recognized by property owners? The following table sets up the costs in round figures for the first year; the absolute amounts represent prewar conditions more nearly than present conditions.

Item	Annual cost	Per cent of total cost
Taxes...	\$125.00	19.4
Hazard insurance.... .	10.00	1.6
Maintenance..... .	100.00	15.5
Heat and utilities... .	138.00	21.4
Depreciation..... .	21.50	3.3
Interest..... .	250.00	38.8
Total.... .	\$644.50 or \$ 53.71 per month	100.0

Taxes are figured at 2.5 per cent of total value; maintenance covers repairs and replacements averaged over the life of the property; depreciation is figured on the sinking-fund basis for 50 years at 5 per cent; interest is on the entire investment in the property.

The percentage distribution of the various housing costs brings out the great relative importance of the money cost, for interest absorbs well over one-third of the housing dollar. Heat and utilities are also a large item, accounting for one-quarter of the total cost. Taxes and maintenance are next in line, for each item constitutes almost one-fifth of the total. Depreciation figured on the sinking-fund basis is of surprisingly small importance, and hazard insurance is an item of little financial significance.

In order to gain perspective on the cost distribution and to see what the effect would be of reductions in the various items, the following table shows the percentage reduction in the total of all housing costs for the first year which would be brought about by a 20 per cent reduction in each of the items while all the other items are held constant:

<i>A 20 Per Cent Reduction in:</i>	<i>Will Reduce Total Costs by</i>
Purchase price...	12.6%
Taxes...	3.9%
Hazard insurance	0.3%
Maintenance	3.1%
Heat and utilities	4.3%
Depreciation	0.7%
Interest.	7.8%

Up to this point, we have been considering the real costs of housing accommodations. But because some of these costs—mainly costs of depreciation, imputed interest, and some operating costs—do not call for immediate or predictable cash outlays, the cost basis is somewhat academic in light of the realities of the market. Householders are guided in their housing decisions by cash requirements to a greater extent than by the real but partially hidden costs that they are undertaking. On a cash outlay basis, the requirements for the first year of ownership of the \$5,000 house that we have been using as an example are approximately as follows:

Item	Annual expenditure	Per cent of total annual expenditure
Taxes...	\$125.00	21.2
Insurance.	10.00	1.7
Heat and utilities.	138.00	23.4
Interest and principal	316.00	53.7
Total.	\$589.00	100.0

Interest and principal are based on a \$4,500 mortgage for 25 years at 5 per cent interest.

The total expenditures of \$589 may be compared with the estimate of real costs of ownership for the first year of \$645, or a difference of \$44 per year. This relationship suggests that the prospective buyer who

considers only expenditures is not greatly underestimating his true financial burden. The only danger lies in not setting aside a reserve to meet the inevitable costs of repair and replacement. While depreciation is not included on the outlay basis, it is significant that the debt is reduced at a rate faster than depreciation for the first 25 years and that, when the debt is finally retired, there will still remain some 25 years of useful life of the dwelling. Thus it is a truly conservative depreciation policy to assume that the retirement of the debt is the equivalent of a depreciation charge.

The following table summarizes certain of the changes in total annual outlay that would result from reductions in the individual items with all other items held constant:

<i>A 20 Per Cent Reduction in</i>	<i>Will Reduce Total Outlays by</i>
Cost of acquisition.... .	16.2%
Taxes.... .	4.2%
Insurance.... .	0.3%
Heat and utilities	4.6%
Interest rate (5 to 4%)	5.2%
<i>An Increase in Term of Loan from</i>	
25-30 years.. . . .	4.5
25-40 years.. . . .	8.9

As in the case of the cost analysis, the importance of the capital investment and the financial arrangements in the effect upon cash outlays are plain.

Up to this point in our consideration of the problem of the costs of shelter, the reader has been disabused of some of the common misconceptions of the true nature of costs and he has been given some perspective on the relative importance of the several housing cost categories. Everyone assumes, and properly, that cost reduction is a good thing. But what are the real problems and possibilities of reducing the various costs, and what would be the repercussions and implications of a lighter burden of cost? The various housing costs differ in their susceptibility to reduction as well as in the probability of actually bringing about a reduction in the foreseeable future.

Capital Costs—Implications of Reduction

The greatest promise for the reduction of the cost burden of housing lies in the category of capital costs. Not only do these costs make by far the largest contribution to the total cost of shelter, but also their sus-

ceptibility to reduction would seem to be great in light of the widely recognized wastes and inefficiencies of the building process.

Let us first examine the case of reductions in the costs of production of housing. We may assume that by reason of increased efficiency in the productive process, new materials or new methods, it becomes possible to make an appreciable reduction in the cost of constructing housing. One of the first questions to be answered is what will be the effect of such a saving on the market price not only of new housing but of the older housing that makes up the existing stock.

The intensity of competition in the local housing market will largely determine whether the savings in construction costs will be passed on to consumers in the form of reduced prices for new houses. When total demand and supply are in reasonable balance in the local market and producers are competing for a limited potential demand for new housing, savings in production costs will be promptly passed on to the new house buyers in the form of lower prices. But in the situation which faces most communities in the early postwar years, much of the economic motivation to pass on savings is absent. Builders have more customers than they can serve for some time. The local housing markets are tight and, by reason of the shortage, sales prices and rents for existing housing are under strong upward pressures. Builders have little incentive to improve efficiency in the first place and no need to pass on the benefits of any savings as long as the shortage of housing continues. Large-scale producers, who should be able to produce at lower costs than the small operators, will pass on only enough of the savings to command a market of sufficient size to make possible the optimum volume of sales. For some time to come in many areas, there will be enough demand to satisfy both the large and the small outfits with no need for price competition. In short, we cannot expect to receive much benefit from a realization of the undeniably great potential of savings in construction costs until the balance of demand and supply has been restored to more nearly normal proportions.

We now come to the question of what will happen to prices of existing housing when finally, as it must, there comes an effective price reduction in new housing as a result of improved technology. In the long run, in accordance with classical economic theory, there will come about a general downward readjustment in the prices of all housing in the market as a reflection of the price reduction in new housing. As new housing of a given quality is made available at a reduced price, existing housing of about the same quality will become relatively less attractive and the owners will have to make price adjustments to meet the new competition.

The next lower grade of housing as well as the next higher grade will then be affected, since they will be at a disadvantage unless the prices are reduced. Thus the effect of the price reduction of the new housing will ultimately permeate the entire housing market and will bring about readjustments in both sales prices and rents. In the housing market, as in other markets, the long-run tendency is for market prices to fluctuate about the cost of production.

But the housing market is so sticky in its reactions as compared with the markets dealing in most other commodities that the time dimension is an important qualification to the generalization just made. Before the price reduction on the new units can affect the entire market segment, there must be specific transactions relating to each dwelling unit. The new housing that is produced in any one year is very small in volume relative to the total housing stock. Thus the initial impact of the cost reductions in new housing is limited. Some landlords may reduce rents in order to retain their present tenants, but for most dwellings there will have to be a change in occupancy in order that the real benefits of the cost reduction may be fully enjoyed. Rental transactions are delayed by the existence of leases and by the general reluctance to move. In the case of home owners, there is no great financial incentive to move into another dwelling at a lower price, since the price at which the present home would have to be sold would also reflect the deflation in values. Thus the process of bringing about a general decline in the level of prices and rents in the same segment of the market into which the new housing is introduced is a slow process. Still slower is the process of passing on this effect into other segments of the market, until finally the entire price level has been readjusted. As the price-distance from the point of introduction increases, the strength of the impulse diminishes. Furthermore, in the upper price ranges of the market, where custom-built luxury housing is characteristic, cost reductions must be very substantial if any effect at all is to be felt in the existing stock. At these levels, personal preference and taste play such a large part in determining the price bid of buyers that market price comparisons are difficult and the shading of price becomes relatively unimportant.

Considering the rental market alone, it is probable that price impulses flow somewhat more freely than in the case of the sales market. The two markets are so inextricably intertwined that they move closely together, but the rental market is the more sensitive. The reason for this difference is simply the greater ease with which tenants may make housing adjustments to changing market factors.

In the lower ranges of the housing market, a general reduction in market prices and rents will have the effect of lowering the point in the

income scale at which families can afford to occupy decent housing. But it is to be remembered that, to make this possible, price reductions must seep down into the lower rent ranges from the point at which the new housing is introduced. The transference of the effect from the point of origin to the far reaches of the market is slow and is hampered by many frictions, which absorb much of the original strength of the impulse.

The fact that lower costs of house building will, in the long run, result in lowering the income level at which decent housing can be supported is significant. But this potential ability on the part of low-income families to buy or rent acceptable accommodations is an empty privilege if there are no units available to them. Even after substantial price reductions have been effected, new units will be built well above the reach of low-income families. Thus the new construction will not provide the alternative accommodations that will permit these families to abandon their substandard units. Until new dwellings can be built directly for these families, at prices they can pay, the filtering process, with all its delays and imperfections, must still be depended upon as the market mechanics of providing them with the physical reality of dwelling space. Cost reductions and lower prices for new houses will not benefit them unless a sufficient surplus is created and passed down to make the benefits effective at the bottom of the market. However, the very fact of cost reduction will permit new housing to be built at lower levels than possible before and thus the price-distance to the area of substandard units will be reduced. As a result, the filtering down of surplus units, if any, will require proportionately less time.

One of the effects of reducing the costs of construction and thus the price of housing is to effect a proportionate reduction in the down payment required to finance the purchase of a home, since the down payment is ordinarily a function of the total value. Effectively the same result derives from a reduction in the several costs incident to the acquisition of ownership, such as some of the costs of conveyancing and the initial costs of financing. These costs are ordinarily not considered to be a part of the purchase price but must be met at the time of purchase out of the same reservoir of funds from which the purchaser draws the initial payment on the purchase price. An adjustment in the terms of financing by way of reducing the down-payment requirement will have many of the same market effects as a price reduction, although without an actual reduction of costs.

The most obvious effect of a reduced down payment, by whatever means, is to encourage home ownership. As initial cash requirements are reduced, a greater number of families will find that their cash

reserves are sufficient to permit consideration of home purchase. For a large proportion of the total of potential home owners, the decision to buy is based primarily on the initial cash requirements in relation to cash reserves and the continuing foreseeable periodic cash outlays, usually monthly payments, in relation to the level of family income. The price placed on the property and the price bid is significant primarily as a determinant of the down payment and monthly payment. Thus lower immediate cash demands and lower monthly payments are more important to most buyers than lower asking price.

Other important benefits that accrue from a reduction in capitalized costs are smaller outlays for amortization, a lower tax burden, lower hazard-insurance premiums, and a smaller interest cost on both borrowed funds and equity investment. The cost of depreciation will also be smaller, since the base or initial value is lower. Thus, as the capital cost is reduced, not only will monthly payments and other periodic outlays be smaller but also the real costs of ownership will be diminished.

Reduction in the price or value of housing as a result of reduced construction costs or for whatever reason is not an unmixed economic blessing. Any price that falls out of adjustment within the price structure gives pain to some groups. In the housing market, the falling off of values means a loss in capital for investors, including home owners; the margin of protection of lenders on real estate security will be reduced and risk increased; the total outlet for investment funds in the housing market will be less than before.

To summarize the conclusions with respect to the market reactions to a reduction in the capital cost of housing, the following statements may be made.

1. The most important influence on prospective home buyers comes by way of the reaction to reduced cash requirements, both initial and periodic.
2. Reductions in initial cash requirements reflecting reduced construction costs or reduced costs of conveyancing and initial financing will serve to encourage home ownership.
3. The savings from construction economies are not likely to be fully passed on to the buyers so long as the housing shortage continues.
4. The benefits of reduced costs will permeate the entire housing market only very slowly and imperfectly.
5. Reactions in the rental market will be somewhat more prompt than in the sales market.
6. The benefits at the bottom of the housing market will be slow in effectuation and will remain only as a potential benefit until surplus units filter down so that substandard dwellings may be abandoned.
7. Lower capital costs mean reductions in tax payments, insurance premiums, interest costs, depreciation charges, and amortization payments. Thus a reduc-

tion in construction costs not only reduces the total financial burden of providing the original capital, either out of assets or by obligating future income, but also multiplies its own effect by automatically reducing all the costs and financial burdens that are functions of the purchase price.

Capital Costs—Reduction Potentials

Just as the various elements that enter into housing cost are found to vary with respect to their relative financial importance, so also do they vary in susceptibility to reduction. At one extreme are found certain cost elements, which show no inclination to decline and are likely to resist positive attempts to effect reduction. On the other hand, some housing costs exhibit a falling level and might fall at a faster rate under a definite program for reduction. It is the purpose of this section to examine some of the major elements of capital cost with a view to analyzing the factors that influence the cost levels and to determining in what manner a reduction may be brought about.

Building Land. One of the important components in the capital cost of housing is land and land development. Improved land represents from 10 to 20 per cent of the total investment in a single-family house and from 8 to 15 per cent per dwelling unit in multifamily structures.

To a considerable extent, the cost burden of raw, undeveloped land that has ripened for residential use is determined by the situation in the land market at the time when the land is acquired. The minimum market price for such land is set by the value of the land in alternative uses, such as agricultural use. Beyond this point, the relationship between demand and supply plays an important part. During slack times in the building industry, the value of raw land hovers about the minimum. In speculative land and building markets, the price may rise to high levels; in the past, prices have soared to fantastically high levels. But the semimonopolistic position of agricultural land at the edge of urban development has been disappearing in recent years with the increasing spread of automobile transportation. No longer do cities grow simply by accretion at the edges or out along lines of public transportation. The net of highways and the universal ownership of cars have joined to expand the geographic boundaries of local housing markets so that they now include vast areas of raw land sufficiently accessible to compete in the land market. This ample supply of potential subdivision land tends to keep raw land prices at reasonable levels. There is nothing in the picture of the future that is likely to reverse this situation. The further improvement of the highways about urban centers and the promise of cheaper and more efficient cars suggest that the diffusion of the suburbs will be greater rather than less.

In the past, one of the wastes in the provision of housing has been that arising from premature and inappropriate subdivision and from land speculation. Poor land planning also has made a large contribution to housing costs. Some of the burdens of irrational land development and speculation are direct, such as the cost of holding land that has been prepared in advance of need or the inflated price paid for land by the prospective home owner or the builder who buys when speculation is rife. Other cost burdens are indirect but nonetheless real, for economic waste ultimately creates costs that the householder must bear. Unintelligent land planning creates a poor quality of environment and contributes to an abnormal rate of value depreciation. Premature subdivision and poor selection of location for subdividing lead to tax delinquency, scattered and uneconomical building of homes, and financial distress to cities and political units, which finally results in a generally higher level of property taxes. Another result of the bad odor of poor subdivision developments is a higher cost of money both for land development and for the financing of homes in neighborhoods of uncertain future.

The basic sources of uneconomical land costs are cupidity, lack of market information, and lack of understanding on the part of both land developers and land buyers. It is often said that there are few examples of subdivisions that show an over-all profit from lot sales. In too many cases, everyone loses—the developers, the lot buyers, and the community. The subject of subdivision controls was considered in a previous chapter. It was pointed out that much progress has been made and that housing in the future will probably bear a progressively decreasing burden from malpractice in the development of building sites. In the first phases of the postwar building boom, prices of land may rise substantially as a result of the heavy demand for building sites. But this is a cyclical effect, and, in the long run, continued pressure by public and private agencies toward better quality in land planning, a greater knowledge of city growth principles, and the dissemination of market information will reduce the wastes and inefficiencies that arise from irrational land development and from unproductive land speculation.

The real cure, if we prefer to utilize the natural forces of the land market in preference to external public controls, is the development and dissemination of knowledge and understanding among the participants in the market. We should seek a better knowledge of city growth through research, for the subdivider is creating the future pattern of the community; we should attempt to develop sounder land planning standards; we must educate more professionals in the field in order that advice to developers and buyers may be more dependable; we must collect and

analyze housing market data on a local basis and disseminate the findings broadly so that all may be guided to wise decisions.

The cost of preparing land for housing use is generally greater than the cost of the raw land, except, of course, in the case of land for high-grade development, where the site value results in a premium price. A reduction in these costs may possibly come from the development of cheaper materials and better methods of installation, though there is no evidence in sight that much attention has been given to the technology of providing sewer, water, and street facilities. Even though the actual cost of land improvement is not reduced, it would be possible to lighten the direct financial burden on housing by shifting the costs. It is sometimes proposed that, instead of charging the costs of streets and utilities directly against the properties served as a direct levy in the form of a special assessment, it would be more reasonable to pay for all street improvements out of the general tax receipts and to recover the cost of the capital investments in sewer and water systems out of service charges. This shifting of the burden would relieve the householder of a part of the burden and would lighten the load by spreading it over a longer period of time. There might also be some savings in the form of lower interest charges on the capital advanced. The property owner would pay his share of the street improvements in the retirement of the general city debt. The costs of installing sewer and water would be paid as a portion of the service charge in the same manner as the customers of private utilities pay the capital costs of electric or gas service in their monthly bill. The net over-all saving to the taxpayer might not be very great but the annual outlay would be smaller. At an earlier point, we discussed the spreading practice of requiring that land developers must install and fully pay for all improvements. This plan has the effect of reducing the periodic charge on property owners, for land development costs are merged with all other production costs and become an indistinguishable part of the capital investment, which is normally financed through a high-percentage long-term mortgage. Thus the costs of land development are paid for over the term of the mortgage like any other capital cost instead of separately over a shorter term of 5 to 10 years through the special tax assessment device.

Labor Costs. The long-term trend of steadily rising wage levels gives no indication of a reversal that might, over the years, result in lower labor costs in the house-building process. In so far as wage rates in the building trades are out of line with rates in other occupations, it is the result of the notorious instability of employment that characterizes the building business. High wage rates, limitations on productivity, and restrictions on apprenticeship and other labor practices that decrease the

efficiency of labor are in large part defensive against the insecurity of employment in building activity as a result of its seasonal and cyclical characteristics. If employment could be regularized, there would be less occasion for jurisdictional disputes, a better basis for adjusting the inflow of apprentices to the needs of the industry, less inclination to place limitations upon productivity and to resist the introduction of improved methods and new materials, and more willingness to accept a lower hourly rate in return for continuous employment.

It is possible that a greater mechanization of the industry, increasing standardization of product, and an increasing share of the production under factory conditions will result in lower labor costs, even though wage rates are not reduced. In the future, a larger share of the manpower requirements may be satisfied by the use of unskilled and semi-skilled workers and a greater efficiency in the labor factor in general may be attained. But these results will not be accomplished unless the volume of building is large and unless there is an increase in the size of the productive units that operate within the industry. Stable market conditions are conducive to the large capital investments that these developments require.

Technological Advance. Great hope has been expressed that the building industry is hovering on the verge of a technological revolution that will bring major economies and lower housing costs. But the market uncertainties that face the industry are serious retardants to technical progress. Given greater assurance of market stability and more dependable forecasts of market trends, we might expect the development of more large, well-financed organizations equipped to carry on the continuing and costly research without which little progress will be made. Furthermore, to take advantage of new methods, capital investments are required to build the factories, to make the new materials, or to buy machinery required by the new methods. Such commitments are not often made in the face of chronic market uncertainties. Mass production, which holds promise of economies, calls for a large and steady volume of demand in order to justify the investment in equipment and the assembling of an organization of sufficient size. A real understanding of the market and better methods of market analysis would go far toward encouraging entrepreneurs to risk capital in new techniques of production, in new forms of production organization, and in the development of new materials.

An additional obstacle to cost reduction through new methods and materials is found in the archaic and inflexible building codes that control new construction in many jurisdictions. Many of these codes specify the dimensions of structural members, the methods of joining, the kinds

of materials, and other specifications in minute detail. Too often, the requirements are based on traditional but outdated methods; the standards of safety through structural strength and fire protection are typically in excess of reasonable standards; and in many a larger city, the code is in part the product of political influence in the protection of vested interests. Housing must, of course, be strong and safe, but not at excessive costs when the costs are unjustified. The cure is code revision with the standards expressed only in terms of performance and with the admissibility of new methods and materials dependent only upon the outcome of performance tests. The remedy is simple, but the political obstacles in most communities are great.

Costs of Industrial Disorganization. The rationalization of the house-building industry will come about only when there develops a substantial number of large house-building organizations. Such manufacturers must be of sufficient size to command the highest technical and management skills, to carry on research in construction methods and materials, to effect major economies in costs of materials and equipment by short-circuiting the present cumbersome and costly system of distribution, to form strong bargaining units for negotiations with labor, and to build in sufficient quantity to secure the efficiencies of standardization of operations. Such organizations should be strongly financed so that they can afford some experimentation in new designs and new methods and so that they have sufficient working capital to carry out the full development program on large projects from the raw-land stage to the completed home in the hands of its final purchaser. It is quite possible that some rationalization of the industry may be brought about as a result of the increasing amount of factory fabrication of parts, extending up to the construction of the full shell in the form of large panels for site assembly. The fewer the component units to be assembled and the less the site processing required, the greater the opportunities for reducing both production and distribution costs.

The large number of failures and bankruptcies among builders in the past has contributed without doubt to the high cost of building, for all those entities which deal with them—the bank that advances funds, the supplier who gives credit for building material, or the manufacturer of construction machinery who sells equipment on time payments—all these agencies must add to their respective prices a margin to cover the high risks of the business. As there is an increase in the number of large, well-financed, and competent building organizations in the field and a decrease in the incompetent and poorly financed builders, the cost of the business risk will fall less heavily on the ultimate consumer of the product.

The industrialization of the house-building industry is seriously hamp-

ered by market irregularities and market uncertainties. Large building organizations will not develop in any significant number unless there is a reasonable assurance of a large and steady demand sufficient to warrant the investment in organization, in machinery and equipment, in research, in land acquisition, and in large-scale purchases of materials and parts. To a considerable extent, the irregularities can be reduced by reducing the uncertainties. When men have a fair understanding of the market conditions that face them they are enabled to make adjustments that dampen the very fluctuations against which they are preparing. Better methods of analyzing local market conditions will aid in giving confidence to entrepreneurs in initiating operations. Surely, uncertainty is a bar to sound development, and the reduction of uncertainty will be a prime stimulant to progress.

Product Design. The design of the single-family structure that is the predominant product of the building industry is not well suited to the dynamic nature of the housing market. In the first place, the fixed interior arrangement is not adaptable to the changing composition of the occupant family. Again, the unit is built for owner occupancy and is not well suited to the income-producing characteristics that it must assume when it is rented at a later stage in its economic life. For example, a large house that is designed for occupancy by an owner family with several children must be altered and subdivided to meet the needs of small families in the rental market. Finally, in so far as a new house is designed in accordance with current style preferences, it will suffer from style obsolescence as tastes change. These characteristics of inflexibility take a toll in value loss and must be counted as contributing to housing costs. More attention to function in design, to convertibility, and to greater flexibility of use in interiors will help to reduce these costs. Here, again, intelligent market analysis can be an aid to the rational design of dwellings, so that the basic functions of living are accommodated and so that as much consideration as possible is given to social trends that may influence future utility and resale value.

Cost of Money

Within the past 15 to 20 years, there has been a substantial reduction in the cost of money for financing house construction and home purchase. During the twenties, contract interest rates averaged 6 to 7 per cent and effective rates from 1 to 2 per cent higher by reason of discounts and high service charges that concealed discounts. Changing conditions in the investment market and the introduction of governmental controls have brought effective rates on new loans down to 4.5 and 5 per cent, with lower rates for prime loans. Incidental charges are at a minimum,

representing, in many institutions, less than the actual expenses to the lender in putting the loan on the books. There is evidence that the large volume of funds that are seeking investment will keep the costs of money from increasing over the long run; the question is whether this cost will not be further reduced.

The balance of demand and supply of funds in the investment market is a powerful influence on interest rates. The postwar building boom will greatly increase the demand for funds, but it will take some time to restore the total of real estate mortgage loans to the immediate prewar levels and more time to restore the total to that of 1930. During the thirties, the maximum interest rate established by FHA for insured loans was a sufficiently potent market factor to lead the way to a generally lower level of interest rates throughout the market. Even if FHA should become less of a market factor in postwar years, the influence of the maximum FHA rate will be powerful, and market competition will force all institutions to meet or approach the FHA level. With a virtually full guaranty by the United States Government, there are some persons who see no real justification for an FHA maximum rate as high as at present. The increasing shiftability or liquidity of mortgage loans, which has been encouraged as a matter of national policy and which has developed as a concomitant of the growing national mortgage market, is a factor that increases the attractiveness of mortgages to investors and is a force in the direction of lower interest rates. Thus the volume of investment funds, the influence of the FHA interest rate, and the increasing familiarity with and popularity of home mortgages as sound and profitable investments all give hope that the cost of mortgage money will resist upward pressures on a long-term basis.

The interest rate on mortgage money reflects in part the opinions of lenders on the risk involved in that type of investment. Risk is a direct reflection of uncertainty; thus the reduction of uncertainty will reduce risk and the charge required to cover risk, which is a part of the interest rate. Greater knowledge of the market will reduce the uncertainties in the minds of the lenders. Along with greater understanding will come better techniques of investment analysis and risk measurement. Greater market stability will also contribute to a lower interest rate by increasing predictability. The various factors that influence residential property values must be better understood, better measured, and better controlled if rates are to be reduced through lessened risk.

The terms under which loans are made are hardly separable from the interest rate as a reflection of the lender's interpretation of risk. If the risk is judged to be sound a long term may be granted, whereas

under an uncertain situation a short-term loan is made to permit more frequent reappraisal of the future. The permitted percentage of loan to value is also a reflection of risk as well as the rate at which amortization is required. Each of these loan terms affects the burden on the borrower in terms of cash requirements, if not in terms of total cost of money. It follows, then, that a reduction in risk might effect not only the cost of money as represented by the interest rate, but also the burden of financing as measured by the initial cash requirements for equity and the size of the periodic cash outlays.

So far the discussion has applied primarily to the financing of houses for owner occupancy. But the same principles apply in the case of financing rental properties. In fact, since the credit cushion represented by the earning capacity of the owner and his attachment to his home is absent, the ability to interpret future market conditions and the stability of the market are more important for loans on income properties than for home loans.

Interest on borrowed funds is not the only money cost involved in housing. The imputed interest on equities is also a cost that is measured by the interest that might have been earned if the funds tied up in the equity had been invested in alternative investments of similar risk characteristics. The surplus of investment funds and the money policy of the government necessitated by the huge national debt both suggest that the general level of interest rates will not rise substantially for some time after the war. This nation has shifted its status from a debtor to a creditor nation, a fact that means that, in the long run, interest rates may slowly fall. Thus a general decline in the structure of interest rates would mean a decline in the rates on such alternative investments and therefore a reduction in the cost of both equity and mortgage financing for housing.

Property Taxes

Property taxes are a major housing cost upon which upward pressure is constantly being exerted. Taxes contribute 15 to 20 per cent of the annual cost of shelter, and in many cases up to one-quarter of the annual cash outlay. Municipal services are steadily expanding, with little evidence that citizens will be willing to accept a lower level of service for the purpose of relieving the financial burden. It does appear, however, that the resistance to further increases in taxes is waxing stronger. The result may be a shifting of a portion of any additional load from real estate to some other source and perhaps the opening up of new sources, such as the local pay-roll or income tax. But the householder will continue to bear the major costs of the services that he

receives, regardless of the channel, although some redistribution of burden may result.

Maintenance

Reductions in the cost of upkeep and replacement could come from at least three sources: improvement in the quality of the building elements so that wearing qualities are bettered; decline in the prices of the materials and labor that enter into repair and replacement; general improvement in the maintenance policy of property owners to avoid excess deterioration resulting from uneconomical deferment of upkeep. There is some hope for continuing improvement in the wearing qualities of building materials and equipment, but an offsetting factor is the increasing amount and complexity of mechanical equipment requiring skilled maintenance and frequent replacement of parts. As in the case of the automobile, it will probably eventuate that the wearing qualities will steadily increase but that the owner will find it increasingly difficult to make his own repairs and will have to pay for skilled service.

The hope for reduced costs of materials and labor are tied in with similar hopes relating to new construction. In the course of time we may expect progress in the development of cheaper materials and more efficient construction methods, which will minimize costs of upkeep and replacement. Finally, a sound policy on upkeep can do much to reduce total costs over the life of a property. The availability of credit to householders for such purposes is important, and governmental agencies can be effective, as in the case of Title I loans insured by FHA. The dissemination of information by private and public agencies will help to encourage proper upkeep, with the result that over-all costs will be minimized and depreciation retarded.

Depreciation

The term "depreciation" will be used here in its most simple and most literal meaning, *i.e.*, loss in liquidation value or decline in market price, for the dollar returns from the actual liquidation of the asset constitutes the only base against which the owner can measure his loss or gain at any point in time. There are many factors that may bring about loss in the liquidation value of residential real estate—fluctuations in the housing market, physical deterioration of the structure, obsolescence, and changes in the environment of the property. The actual depreciation or loss that directly affects the owner's bank balance is the difference between his dollar investment in the property and the number of dollars he receives when he sells out his interest. It is clear that this difference will be greatly influenced by the timing of the purchase and the sale,

for the wide fluctuations in real estate market prices are notorious. Thus, if an owner buys at the bottom and sells at the top, he may suffer no depreciation, but rather may enjoy an appreciation in value. If he buys at the top and sells at the bottom, his loss will be substantial. In order to minimize losses of this type, the fluctuations in the market must be damped and the owner must be so soundly financed in his ownership that there will be the least possible chance that financial circumstances will force him to sell at an unfavorable time. There is little that can be done to reduce the possibility that other kinds of circumstances, such as moving out of town, will precipitate liquidation, although any factors that reduce the mobility of the population will act to this end. But it is clear that a more stable market will be favorable to the reduction of depreciation by reason of price movements. A previous section has considered the effect on stability of the expansion of knowledge of market characteristics, a better measurement of market factors, and better techniques of market analysis.

Depreciation is not finally realized until an actual transaction takes place. Therefore, if the owner can ride through depressions in the level of market prices without being forced to sell by reason of an inability to meet the fixed charges incident to ownership, the ultimate depreciation may not be inflated by unfavorable market conditions. As a protection, therefore, it is important that home owners and investors be soundly financed, that they do not overbuy in relation to income, that the monthly fixed charges are adjusted to monthly income with some margin of safety. Because the economic factors that bring about depressions in property values are to a considerable degree the same factors that cause declines in family incomes, there are many families that will find that home ownership, with its fixed charges and with a relatively high risk of heavy depreciation for owners whose incomes are unstable, is a poor business risk and that tenancy, with its great flexibility, is a sounder status.

Deterioration is that loss in the serviceability and desirability of the housing unit which is the result of physical change in the components of the structure and which is reflected in market price. The quality of the original construction is an important determinant of the rate of deterioration. Quality can be controlled by widespread education of builders and of buyers in sound construction methods, by controls exercised by lenders in insisting upon sound construction, and by government agencies in the home-financing field, such as the FHA. There is hope, too, that new materials and new building methods will be found to increase the longevity of residential structures, for it is clear that the longer the period of time over which a given loss in value can be

spread, the less the annual or periodic cost of depreciation. Adequate repair and replacement will retard depreciation that arises from physical change, but there is always the question of whether the costs of maintenance are justified by the saving in depreciation. We need more guidance on this point if owners are to pursue policies of maximum economy in the matter of repairs and maintenance. Favorable terms of financing the modernization of dwellings also will aid in combating value loss from deterioration.

Obsolescence is a purely relative matter, depending upon changes in tastes, fashions, design, materials, and equipment. About the only policy that can be effective in minimizing the forces of obsolescence is that of building only that housing which represents the latest technological developments, which reflects the latest fashions, and which gives recognition to basic social trends. To build something already out of date is to suffer a loss before the structure is completed. Soundness of design will minimize the influence of obsolescence; fads must be avoided. With the increasing rapidity in the advance of technology in the housing field and the increasing number of items of mechanical equipment, it is quite likely that the rate of obsolescence will rise in the future. This is the price of progress, and we should not want to inhibit it, for in the end, if not forthwith, it will yield better housing at lower cost.

One of the important contributors to loss in value is environmental change. Location or environment is an important attribute of housing and is a quality that is one of the determinants of market price. The qualities of location, like the physical structure of the dwelling, are impermanent and are subject to forces of deterioration. Except in the early stages of the development of residential areas, environment does not improve with the passage of time. In fact, the opposite effect is inherent in the nature of residential land use in American cities.

The deterioration of environment may be reduced, first, by building the best possible neighborhoods and, second, by establishing the most effective possible protections against decline in quality. To be effective, both of these measures must be founded upon a thorough understanding of the housing market, particularly the forces of city growth and change. Not only must the general principles of urban dynamics be understood, but for each community the individual and peculiar combination of factors must be understood; for each urban area is at a different stage in its evolution and is the arena for a special set of social and economic forces that determine the growth and shifts in its land use pattern. Before we can attain a high level of quality in the planning and development of new neighborhoods and before highly effective controls can be evolved and applied, we need a great deal more research and study in

the field of urbanism. For example, the standards employed by city planners are still crude approximations, and zoning regulations are more subjective than objective. Not only must individual neighborhoods be soundly executed if the environment is to be of the most desirable quality and be best preserved, but the entire city structure should be logically developed; no neighborhood can be fully insulated from the influences of all other areas within the market.

The various social controls of land use under the police powers are in need of further refinement and of more widespread application. Zoning, subdivision regulation, planning, and building regulations are useful devices for environmental control, but they need to be improved, applied in all communities, and extended in their application beyond the political boundaries of cities into the hinterland that is ripening into urban maturity. Devices for conserving existing neighborhoods to retard the decline in their quality are in need of further refinement.

Price Levels

The levels of sales prices of used houses and of rents are basic determinants of housing costs and housing quality for many families. Thus market fluctuation in these prices is a cost factor of primary importance. Home buyers who make commitments in times of housing shortages and high prices must bear a heavy burden of cost relative to quality of shelter during their tenure and may suffer a substantial depreciation if the property is disposed of at a low point in the market. Purchasers at depressed levels benefit through low costs and lower risk of large depreciation. Thus much of the housing cost to the home owner is set for the full term of his occupancy by the price level at time of acquisition; the tenant, on the other hand, shifts his housing costs more readily with the movements of the rent level.

There can be little doubt that the wide fluctuations in the housing market price levels are a social detriment. The suffering from inflated prices far outweighs the gains from taking advantage of depressed conditions in the market. Stability of prices will, in the long run, produce lower total housing costs. Stability depends upon a close adjustment between housing needs and housing supply; and this adjustment, in turn, calls for more intelligent action by the participants in the market based on fuller and more dependable market information and upon a better understanding of market phenomena.

Conclusions on Housing Costs

The underlying costs of housing are derived from the absorption of capital and labor; and the amount of capital and labor that is employed

and, hence, the basic cost, are functions of the quality of the product. But we should not seek a lowering of the quality of housing in order to effect a lowering of shelter costs.

The original cost of shelter reflects the efficiency with which capital and labor are utilized in the production process. Technological advance and a reorganization of the building industry can increase efficiency and reduce waste. Monopoly inhibits cost reductions. The short-term variety, based on an unbalanced market, stands in the way of passing savings on to the consumer; the cure is to restore the market balance and to encourage competition. The organized monopolies of business combinations in the building-material field must be fought, as in the past, by enforcing the antitrust laws, and all obstacles to the marketing of new and competing products must be removed. The monopoly of organized labor in the building trades, which can bar progress if it will, must be met by assurances of increased job security for workers.

Change—social, economic, and technological—is a basic source of cost. Change that marks real progress is not to be counted a net social loss, though it may bear heavily for a time upon the householder. The defense against change is not to outlaw change, for progress would be inhibited, and, in fact, the underlying dynamics of society is not controllable. But change can be controlled for the good of all in some cases, as, for example, the use of zoning ordinances to protect neighborhoods against uneconomical changes in occupancy and land use. Many changes can be forecast and adjustments made to them with a minimum of loss. For instance, an analysis of the underlying trends in the age distribution of population and the composition of families might permit a better adjustment in the housing stock and in house production to fit the future market needs. Changes in tastes and customs, in social valuations and ways of life, if watched and studied, can be better understood and their effect better predicted. The losses resulting from shifting city structure can be minimized if the phenomena of city growth are illuminated and are made more predictable. Thus the reduction of the uncertainties of change holds promise of cutting the costs of change and bringing to the householder more economical housing.

Uncertainty lies at the bottom of many of the uneconomic costs of housing. The costly imperfections of the housing market are in large degree the result of a lack of full market information and of a widespread inability to interpret market phenomena. As a result, we have suffered from premature and inappropriate subdividing, overproduction of housing, freezing of the mortgage market, a substantial risk element in interest rates, and excessive profit margins. Labor costs are higher than need be by reason of the uncertainties of employment; the ration-

alization of the entire building industry, which is requisite to the reduction of waste and inefficiency, is hampered by the uncertainties of the market. Technological advance stumbles over the lack of adequate interpretation of future market needs.

Change and uncertainty can never be eliminated, but they can be illuminated. Housing costs will be reduced as we increase scientific knowledge of the housing market and as we increasingly base market decisions on dependable and complete market facts.

CHAPTER 16

THE ECONOMICS OF HOUSING POLICY (*Continued*)

PART IV. THE REGULATION OF SUB-STANDARD HOUSING CONDITIONS

The Problem

There is a portion of our society whose housing state is so parlous that it rests heavily upon the social conscience. The subject of the social significance of substandard housing has been well worked over, and, though the neglect may seem unnatural to students of housing literature, we shall devote little space here to its consideration. No one has produced a convincing quantitative measurement of the bad housing in the nation, in large part because the measurement is dependent upon the housing standards assumed to be minimum. President Roosevelt said that one-third of the nation was ill housed; that meant some 12 million families. The National Housing Agency estimated that 7 million dwelling units were substandard in 1940 in urban areas. These crude approximations may well overstate the problem. But few informed persons will doubt that there are several millions of our fellow citizens living under desperate and dangerous housing conditions even after some improvement in the physical condition of our housing stock as a result of prosperity. Certainly the replacement of such a percentage of our housing is a social venture of staggering and discouraging proportions. We know that the incidence of this problem varies widely among our cities but that all of our large urban areas contain noisome slums; that many of the smaller cities have incredibly bad housing conditions within and about their borders; and that rural housing in many parts of the nation is an active social menace. Whether the figure be 2 or 4 or 7 or 12 million, we are faced with a social problem that could absorb our energies for some time to come; it is accentuated by

postwar housing shortages; it will grow worse with time as the aging of dwelling structures takes its toll.

The existence of widespread antisocial housing conditions bespeaks the past inadequacy of the housing market machinery in providing socially acceptable shelter for all economic and social groups. Now this inadequacy in the product of the market forces is not primarily the result of the imperfections of the market processes. We shall see that the lack of enough standard housing for poor people is explained first by the fact that the article, socially acceptable shelter, occurs in large and complex units, innately expensive, and that the impecunious occupants, for the most part, have the lowest and most uncertain incomes among all our population. It is true that many of the costs of occupancy of bad housing, as well as of good housing, contain elements of waste and that some amelioration of substandard housing conditions at the margin might flow from stabilization and rationalization. But no practically attainable degree of perfection in the housing market will offset the basic discrepancy between the inherently costly physical characteristics of acceptable housing and chronically low levels of income.

A distinction must be made early in this discussion between the objective of eliminating antisocial, substandard housing conditions and the objective of raising the general level of housing among the lower income groups. The two objectives are widely overlapped, but there is a difference in scope and in approach. To reduce the incidence of substandard housing directly, we first determine upon the minimum socially acceptable standards so that the unacceptable housing can be identified. We may then proceed to diagnose the causes of the pathological conditions and to apply direct remedies. On the other hand, if our objective is a general rise in the standard of living as represented by shelter situations, we are not concerned with the dividing line between acceptable and unacceptable, and the remedies are more fundamental and broader in scope. The discussion in this chapter takes the narrower of the two objectives as a starting platform. Our viewpoint is simply that there are certain housing conditions that are detrimental to the general welfare of society. It is the function of the legislative bodies and the courts to define these conditions. It is the function of the democratic process to weigh the potential gains promised by alternative remedies against the losses in freedom of individual choice that the remedies entail and to determine finally the course of action. This discussion is directed to an analysis of the workability and effectiveness of the alternative remedies.

The number and nature of the alternative remedies for substandard

housing conditions are set by the problem. The possible remedies may be classified as follows:

1. Higher incomes
2. Lower costs
 - a. Smaller, simpler product
 - b. Greater production efficiency
 - c. Lower operating and financial charges
3. Faster value depreciation of standard housing
4. Enforcement of minimum standards
5. Subsidy

The curing of housing ills by adjusting incomes has already been disqualified for discussion here as out of bounds. In passing, however, we must recall the fact that, if incomes should rise, the quality of housing will not increase in direct proportion. The subject of lower housing costs has been discussed in the preceding section, but the application to the problem of substandard housing will be dealt with later in this chapter. The lowering of costs of housing by simplifying the product can quickly be dismissed as a practical method for eliminating substandard housing conditions. In the first place, the long-term tendency has been for housing to become more complex. We should not be misled by the disappearance of the large mansion or the reduction in size of the middle-class single-family residence; these changes have affected only a small portion of the population. Far offsetting any size changes has been the very considerable increase in the complexity of the dwelling and, in general, in its comforts. It is better insulated, the windows are tighter, it is structurally stronger, the kitchen and bath are fancier, and, in general, the equipment—the plumbing, the kitchen gadgets, and the heating plant—are far advanced in number, complexity, comforts, and—cost. This is the trend, and there is every evidence that it will continue. The dwelling may become even more compact but it will not become less complex. If the capital cost is reduced in the future, the savings will flow from increased production efficiency and not from product simplification. One has but to inspect the dwellings of the poor to satisfy himself that the accommodations are already at the very minimum of size and complexity; there is no dwelling simpler than a rural shack or a one-room, stove-heated, plumbingless cell in a slum. There is no benefit to the poor in further simplification.

The alleviation of antisocial housing conditions through the process of accelerated depreciation or deflation is a product of more rapid filtering down, a subject discussed in Chap. 11. Faster value loss means

higher housing costs for all occupants, but the increase in the burden diminishes with the descent of the property down the value scale, until it is of little consequence at the bottom. The virtue of more rapid depreciation lies in the effect of bringing more housing of higher quality within the economic reach of low-income families.

Much of the following section will be devoted to considering the enforcement of minimum housing standards through police-power regulation. Later sections will deal with the various proposals for treating pathological housing situations through subsidy.

There is a simple, self-evident truth, which will recur in the arguments to follow and which is too often blandly ignored by the vocal protagonists of various housing philosophies. This truth is that substandard housing conditions cannot be eliminated unless both of two basic objectives are accomplished: (1) the cost of occupancy of acceptable housing must be reduced to a point within reach of the present occupants of substandard housing; (2) a supply of acceptable housing must be made available. We shall see that some proposed remedies will reduce the financial burden but will supply no housing; other schemes provide dwellings but not within the reach of slum dwellers.

What Is Substandard Housing?

We have reached a stage in the evolution of social attitudes where there is general agreement that housing situations can be antisocial. We do not want our fellow citizens to live under conditions that are detrimental to their health, safety, or morals; we recognize that the general welfare of society may be affected by improper housing conditions. Without serious dissent, we now accept the responsibility, through government, for abating dangerous housing conditions and preventing the development of slums. Controls of many years' standing may be found throughout the land in the form of building codes, health codes, zoning ordinances, housing codes, and tenement laws. The principle of social responsibility for controlling antisocial housing conditions is well established and is espoused not alone by reformers but also by individuals and groups that ordinarily are considered to be conservative and reactionary.

The definition, in physical terms, of the point at which housing conditions become dangerous to society is extremely difficult, because on the one hand we lack adequate techniques for measuring cause and effect and because, on the other hand, the social mind is never static. Few attributes of housing can be classified categorically as good or bad; it is always a matter of degree or probability of evil. Thus, the more persons who use a single toilet, the greater the health hazard. The

more sunlight that enters a room, the less the incidence of tuberculosis. The greater the population density in a slum area, the wider the spread of disease and immorality. But the limits of tolerance cannot be set by any positive test.¹ The final test is the unwillingness of society to permit situations beyond a certain level of social risk to continue even though the remedy should involve individual financial loss through the enforcement of police-power regulations or an added tax burden resulting from the provision of public assistance. These social limits of tolerance are evolutionary and reflect, over the long run, the stage of our civilization; over the short run, the cycles of reform and reaction. The legislative bodies, but in the end, the courts, interpret the current state of the social conscience and establish the limits of tolerance.²

Among the multitude of local ordinances, state codes, items of state and national housing legislation, administrative orders and rulings by administrative officers, and court decisions, all dealing with the prevention or abatement of housing conditions that are a menace to the health, safety, morals, or general welfare of the commonwealth, so much is left to administrative discretion that the line between that which is a social menace and that which is tolerable is a broad and foggy zone. The courts have not been particularly helpful in setting the limits to which ordinances and enforcing officers may go in abating unsatisfactory housing conditions. Most of the cases have dealt with conditions that are obviously dangerous to the public by reason of dilapidation or fire hazard. There is little to indicate whether the courts will enforce minimum legislative standards dealing with light, ventilation, interior design, privacy, and other such limitations, which make a somewhat less direct contribution to the general welfare.³

To a considerable extent the determination of minimum standards under police-power regulations is put into the hand of the administering official under general provisions that require him to decide when a structure is so dilapidated as to be dangerous or when sanitary conditions

¹ The Committee on Hygiene of Housing of the American Public Health Association has gone far toward developing scientific health standards.

² In *Spohn v. Stewart*, 263 Ky. 97, 103 S.W. (2d) 651 (1937), a case testing the constitutionality of the Municipal Housing Commission Law of Kentucky, the court said, "The requirements of public health are indeterminate and indeterminable; as knowledge increases, standards of living, of health and of safety constantly rise. It is the changing standard which gives most concern; housing at one period thought eminently satisfactory is presently condemned."

³ See National Resources Committee Housing Monograph Series No. 2, *Legal Problems in the Housing Field*, part 2, "Legal Aspects of Public Housing," by Leon H. Keyserling, p. 48. Recent ordinances, such as the Milwaukee Housing code passed in 1945, undertake to control overcrowding.

are so bad as to require abatement. This type of provision leads to variation in standards as wide as the individual differences among enforcing officers. Finally, the irregular and lax enforcement of housing ordinances constitutes an effective variation in standards, for an unenforced control sets no standard at all.

The housing standards relating to existing housing that so far have been discussed are applied under the police-power provisions of our constitutions. But there is another set of housing standards whose determination is a concomitant of those governmental activities which are based upon judicial approval of public housing, slum clearance, and urban redevelopment as public purposes. Public housing has been declared to be a public purpose to ensure the provision of alternative accommodations for families displaced through the elimination of substandard housing conditions. This activity is said to be justified on the grounds that the elimination of a menace to the public health, safety, or general welfare is a duty of government. It is apparent that it becomes necessary to establish minimum housing standards in order to define situations that are a menace. Under the United States Housing Act and the several state enabling acts, the authority for establishing this definition was placed in the hands of the Public Housing Administration and of the local housing authorities. The determinations are made in individual cases under the equivalent elimination provision and in connection with determining the eligibility of applicants for occupancy in public housing projects. The act provides that for each new dwelling unit constructed one substandard unit must be eliminated. The only guiding definition in the act is found in the words "unsafe or insanitary dwellings."⁴

There is still another arm of local government that, under existing and proposed urban redevelopment legislation, is called upon to set the level at which abatement of antisocial housing conditions becomes a public purpose. This type of law provides for the use of eminent domain under certain conditions where it is necessary to the assembly of a tract suitable for redevelopment purposes. The objective is the rebuilding of slum and blighted areas. Thus, in so far as areas in which housing predominates are concerned, a determination would be required that the housing conditions were antisocial and that their removal would be in the public interest. It is generally provided that redevelopment schemes shall be approved by the city plan commission and shall conform to a general master plan. Thus to the building commissioner

⁴Section 10 (a) of the U.S. Housing Act of 1937 calls for the equivalent elimination "by demolition, condemnation, and effective closing, or the compulsory repair or improvement of unsafe or insanitary dwellings. . . ."

and the health department and the plumbing inspector and the electrical inspector and the local housing authority is added the redevelopment authority or the city plan commission as still another determiner of minimum housing standards, still another point where the level at which housing becomes socially unpalatable is established by administrative ruling.

The test of reasonableness is apparently the only check on the interpretations that public officials might wish to place on the term "substandard" as it applies to housing. In the case of *Rutherford v. City of Great Falls*, the court concludes that

. . . the discretion vested in the Housing Commission to determine what is an unsanitary and unsafe building, and the discretion which it must exercise in the performance and interpretation of the many other powers placed upon it by the legislature, may not be held vulnerable to the criticism that the provisions conferring such discretion carry a delegation of legislative power.⁵

There is plenty of judicial support for the most liberal of interpretations of the term "substandard housing." In *New York City Housing Authority v. Muller*, the effects of slum conditions in bringing economic loss is recognized.

Enormous economic loss results directly from the necessary expenditure of public funds to maintain health and hospital services for afflicted slum dwellers and to war against crime and immorality. Indirectly, there is an equally heavy capital loss and a diminishing return in taxes because of the areas blighted by the existence of the slums.⁶

In upholding the constitutionality of the New York Multiple Dwelling Act, the court used such language as, ". . . those things which government has today considered as part of its governmental function, the bodily, and mental health of its inhabitants. . . ." In a concurring opinion, Mr. Justice Cardozo said, "The end to be achieved is more than the avoidance of pestilence or contagion. The end to be achieved is the quality of men and women. . . . If the moral and physical fibre of its manhood and its womanhood is not a State concern, the question is, what is."⁷

⁵ 107 Mont. 513, 86 Pac. (2d) 656. The court quotes from *State v. Guidry*, 142 La. 422, 76 So. 843: "The authority of the legislature to delegate to the administrative boards and agencies of the state the power and authority of ascertaining and determining the facts upon which the laws are to be applied and enforced cannot be seriously disputed."

⁶ 270 N.Y. 333, 1 N.E. (2d) 153.

⁷ 251 N.Y. 467, 167 N.E. 705, (1929) quoted in William Ebenstein, *The Law of Public Housing* (Madison: University of Wisconsin Press, 1940).

This concern with minimum housing standards and the definition of the term "substandard" was occasioned, you will remember, by an attempt to define the acute phase of the housing problem somewhat more precisely than simply as the elimination of substandard housing conditions. But there seems to be no generally accepted covering definition more precise than that substandard housing conditions are those conditions which endanger the health, safety, morals, and general welfare of the populace. True, there are some specific physical standards, but they are not limiting and are not generally agreed upon. We have only a generalized and open-end definition, which we may presume will keep pace with the broadening of the social conscience and which may be adjusted to extensions of our knowledge in both physical and social fields.

The absence of discussions of minimum standards in the arena of contention between the public and private housers and the relatively few court cases testing specific standards suggest that law and regulation have not yet caught up with the social conscience; that controls are not pushing against the ceiling of judicial acceptability. It is significant that the opponents of public housing do not oppose police-power regulation of substandard housing and that they do not accuse public-housing agencies of pushing the definition of substandard housing too far in seeking credit for equivalent elimination. In fact, a common complaint from the conservative side is that the public-housing device has failed to clear the slums, a complaint that recognizes that there is a dangerously large amount of antisocial housing falling within an agreed definition of substandard.

It is a fair conclusion that an attempt to draw fine distinctions here between substandard and standard housing is merely an academic exercise of little practical value. The fact is that there are hundreds of thousands of families in both urban and rural areas living under conditions that are illegal under existing regulations and many more thousands living under like conditions where no regulation exists or where controls are hopelessly inadequate. In short, there is no argument on the point that housing conditions in this country are cause for grave concern. There is so much housing that is bad beyond question that there is no point in refined definitions. So we shall simply use the term "substandard" without a finely drawn definition and need have no fear that any important confusion will result.

Why Has Police-power Regulation Failed?

The powers of state and local governments to regulate private property in the interests of public health, safety, morals, and the general

welfare are well established and well understood. The regulation of housing under the police powers is not new, for in many jurisdictions codes have existed for decades. The constitutionality of this type of control is now beyond question. Finally, the inherent reasonableness of police-power regulation of housing is appealing, for what is more logical than to treat contaminated dwellings through the enforcement of minimum standards as we treat contaminated meat and to protect society against the dangers of bad housing as we do against the dangers of robbery or riot or smallpox. But there can be no question of the ineffectiveness of police-power regulation in solving the problem of substandard housing. The present scope of the problem is a sufficient testimony to the past failures of this method of control. Not only is the device, as such, inadequate under present conditions, as will be demonstrated later in this discussion, but in the many localities where the machinery has been at hand, it has not been fully utilized. There are literally hundreds of thousands if not millions of dwellings that are illegally occupied in effective violation of minimum standards contained in existing codes.

Police-power regulation has failed in many areas simply because regulatory ordinances have never been passed or because their provisions have been inadequate. There are too many cases where the environs of a metropolis are uncontrolled; suburban towns, villages, townships, and county jurisdictions are typically ill equipped with appropriate laws and adequate administrative machinery. The same situation obtains in many independent communities and rural areas. But even where codes are in force and are reasonably adequate, enforcement typically has been lax and sporadic. The failure to enforce stems from a number of factors usually working in concert. At the bottom is public apathy, for the majority of the population does not suffer from bad housing nor do they come into contact with it. Those families which do suffer are often ignorant of the law or reluctant to complain for fear that demolition or eviction should ensue and they be left with no alternative accommodations or that, after the rehabilitation of the structure, the rent be raised beyond their reach. In addition to public apathy, official laxity is often found; the administrative machinery is likely to be uncoordinated and ineffective; there is often active opposition from influential quarters; the courts are not always sympathetic with enforcement; and, the most important of all, there is the practical problem of finding alternative accommodations for dispossessed families.

Administrative Deficiencies. An underlying defect in housing regulation in many localities is the diffusion of responsibility within the city government. In many cases, regulations are found in a number

of ordinances passed at different times and for different purposes. Each enactment places the responsibility for enforcement in a different place—the building inspector, the city health officer, fire department, water department. Even when all housing regulations are contained in a single code, there may be an allocation of responsibility for enforcement to the appropriate city departments. The result of this kind of administrative arrangement is usually to create a duplication of inspections. Furthermore, since substandard structures are often subject to multiple violations, there may be several concurrent actions for remedy initiated by different city officials relating to the same property. These inefficiencies add to the cost of enforcement and tend to inhibit action.

In most jurisdictions there is no regular inspection of all dwellings to determine compliance. Certain classes of structures, such as rooming houses and multiple dwellings, are more or less regularly inspected in some cities. But for the most part, violations are rarely discovered unless some complaint is made or unless a violation is incidentally discovered by some city employee who is in the building for another purpose. The fact is that almost no city department is adequately staffed to permit the regular inspection of all dwellings, and few are in a position to inspect even the housing in areas where violations are notorious.

Another obstacle to enforcement in many areas is the personal liability of the enforcing officer to suit for damages in case of unreasonable or defective action. The cost, difficulties, and delays of prosecuting violators who fail to act upon notice of violation is another bar to enforcement. Some cities do not assess the statutory penalties for violation because of the unpopularity of the device and the difficulty of collection. Others do not take advantage of the provision that when the owner fails to take action the city may make the repairs and charge the cost to the owner. Most city councils do not make provision for the working capital necessary for the general application of this device, and, even when the funds are at hand, as in the case of the Philadelphia abatement fund, the procedure is apparently too cumbersome to be popular among the enforcing officials.

The administrative obstacles to the enforcement of police-power regulations as outlined here are neither basic nor incurable. Codes can be amended and administrative machinery rationalized to eliminate many of the present defects. Proper enforcement will certainly be more costly than lax enforcement or no enforcement at all, but taxpayers may find that the social costs of nonenforcement are far greater than the money costs of effective control of substandard housing.

Lack of Alternative Accommodations. The most common explanation and excuse for the failure of police-power regulation of housing is the

chronic shortage of low-rent housing and the lack of alternative housing for families dispossessed from dwellings declared to be illegal. It is apparent that when enforcement results in demolition or vacation the supply of housing is reduced. When controls on overcrowding are applied, the result is to displace one or more families from shared dwelling units, thus increasing demand relative to supply, or to evict large families into a supply situation which can provide only small units at low rents. Enforcement of repair and rehabilitation results in the effective removal from the low-rent supply of those units which, by reason of the improvements, are lifted out of the substandard class to a higher quality and rent level. In most of the larger cities, enforcing officers face a situation in which a substantial proportion of the low-rent housing is substandard and where the full enforcement of the law would leave literally hundreds if not thousands of families in the street.

The enforcement of housing regulations brings into play forces that tend to increase rents in the lower levels. While the direction of these forces is clear, we shall not be able to measure their effect until we know more about the economics of slum housing, particularly with respect to its monopolistic characteristics. Thus, to the extent to which slum rents are already pushed to the limit of what the traffic will bear, the pressures for increased rents will be smothered. It is apparent that enforcement will reduce the supply of the lowest rent housing relative to the demand. Thus rents would be pushed to the limit, if not already there, by the desperate competition of families at or near the subsistence level. There would be a strong incentive to double up, and, if the available controls did not cover this matter, the result of the physical improvement of some of the substandard housing would be an increase in the misuse of other units through overcrowding. Certainly the costs of rehabilitation and repair would put pressure on the owners of the properties to raise rents as high as possible in order to recover the added investment. Where existing rents have been supported by two or more families sharing a dwelling, the enforced decrowding of the unit will mean an increase in the rent burden for the remaining family. It would seem, therefore, that although we cannot estimate the strength of the factors tending to increase rents that are the concomitants of an enforcement program, they are bound to have some effect and to bear upon not only all the inhabitants of low-rent housing but even well up the rent scale. A resulting increase in the rents of dwellings just above the minimum will exert pressures on families that have just been able to pay for minimum housing and will force them into overcrowding or into other substandard situations. The burden will be particularly heavy upon families evicted

from substandard housing, who will be forced to increase their housing cost to find any accommodations at all.

We must conclude that police-power controls over housing quality can never be effectively enforced until there are alternative accommodations to offset the reduction in effective supply. And these alternative accommodations must be of acceptable quality and they must be available at very low rents, else nothing has been gained. The presence of additional and alternative housing will offset to a considerable extent the forces of rent increase that are the concomitants of enforcement. In the face of an accumulating housing shortage, the enforcement of housing controls during the early postwar years will be more difficult than ever.

Regulation of Overcrowding. For the most part, the foregoing discussion has dealt with the regulation of the physical or structural aspects of substandard housing. But it is well recognized that bad housing conditions can exist in structures which are adequate in terms of equipment and physical characteristics but which are misused by excessive room crowding. Occupancy that is maladjusted to the capacity and the facilities of a dwelling creates hazards to health, morals, and well-being, which are just as real as if they had stemmed from physical defects. The regulation of overcrowding has not been attempted in many American cities, although the British, by national legislation, have made overcrowding illegal and have enforced a minimum standard as fast as has been permitted by their extensive public housing program. It is probable that overcrowding is not so serious a problem in this country as in the British Isles; certainly there is no general awareness of its evils.

The overcrowding of dwellings reflects one or more of the following factors:

1. Economic pressure, which forces families to double up or which prevents large families from paying the price or rent necessary for a unit of adequate size.
2. Chronic shortage of large dwelling units in the lower rent ranges relative to the number of large families in the lower income groups.
3. Preference for crowding and doubling up as against the expenditure of a larger proportion of the family income for housing. Among certain ethnic groups, the sharing of dwellings by related families is traditional.

The social evils of overcrowding are present whether the crowding is voluntary or involuntary; thus the question of motivation is inconsequential, for we should not permit people to sin against society even if they should wish to do so. Furthermore, there is reason to believe that the tradition of doubling up that is usually interpreted as a preference is only an expression of the historical poverty of the European peasant

and the American Negro. It is significant that the incidence of shared dwellings declines with rising income among those very groups in which it is assumed to be a preferred way of life.

The compulsory renovation of slums offers no solution to the problem of overcrowding in face of a shortage of acceptable dwellings. It has been pointed out that a program of rehabilitation, vacation, and demolition will reduce the supply in relation to demand, even though controls of overcrowding are not included. In fact, if overcrowding is not prohibited, slum renovation will inevitably result in increased overcrowding. It will certainly not result in reduced rents, which might permit families to occupy separate dwellings, nor will it produce the large units at low rents that are necessary for the decent housing of large families. The only solution for overcrowding is the availability of a larger supply of dwellings at rents low enough to permit the separation of families. To meet the needs of large families, there must be an increased supply of large units with rents within reach.

Control of Substandard Environment. Housing can be substandard in terms of environment as well as in respect to the physical characteristics of the structure or the use to which it is put. The effects of environment on housing conditions are less direct than the results of structural deficiencies or misuse but they are nonetheless real. Where railroads or industrial and commercial uses are intermingled with residential uses and where there is heavy vehicular traffic, tangible physical dangers threaten the inhabitants of the area. The health of the neighborhood may be endangered as a result of smoke and fumes from industrial activities, dirt and dust, and even continuing noise. Overcrowding of the land deprives the people of sufficient light and air. Excessive population density may be detrimental in terms of health and moral hazards.

There are powers available to municipalities that are sufficient for the removal or amelioration of many of the existing detrimental environmental influences. A full use of police-power regulations and the application of the power of eminent domain where needed could clear up the worst aspects of slum environment.

1. The elimination of substandard structures will open up the area and reduce population congestion.
2. Compulsory rehabilitation of structures will reduce health hazards for both the occupants and the entire area and will lift the tone of the district.
3. Enforcement of limitations on overcrowding will reduce congestion.
4. Strict enforcement of fire laws and health codes in application to both residential and nonresidential uses will reduce neighborhood hazards.
5. Stricter traffic controls will reduce street hazards.

6. Streets can be closed, opened, or widened to reduce traffic hazards, to re-route traffic, or to increase light and air.

7. The policing of the area and various social services provided can be extended and improved.

8. Some kinds of deleterious activities can be eliminated by the application of the nuisance doctrine.

9. Parks, playgrounds, and other public areas can be provided by purchase or condemnation.

10. The preparation of a master plan for the city with appropriate rezoning of slum areas will provide a better basis of prediction for owners and will encourage either renovation or demolition of substandard structures.

No new powers are required to effect the neighborhood improvements just listed and very little additional administrative machinery in many communities. A combination of these measures can remove the most serious evils, although only clearance and redevelopment can fully excise the undesirable neighborhood conditions. But the application of any of these devices that results in a reduction in the supply of low-rent housing will only recreate slum conditions in another part of the city unless decent alternative accommodations are available.

Prevention of Substandard Housing. Up to this point we have considered only the remedy of antisocial housing conditions, yet it is equally important to reduce future problems of elimination by forestalling the creation of such conditions. There are adequate powers in the hands of most city officials under the various codes relating to new construction and remodeling to prevent the erection of substandard structures within the city limits and to assure that physical changes made in existing structures shall not create undesirable housing. Unfortunately, suburban and rural areas are not often under adequate controls. Building permits are not always required and few housing codes are in force. One of the most serious menaces to our cities is the uncontrolled building of peripheral shack towns made up of houses that are substandard, slum dwellings from the start. We shall never free ourselves of bad housing if slums are being built at the edges of our cities faster than substandard housing is being cleaned out of the central areas. State building codes, where they exist, often affect only multifamily structures. There is dire need for more widespread township, county, and state controls over building and for the adoption of local codes by the thousands of municipalities that do not already have such protection.

The powers for controlling land use and for preventing the overcrowding of the land are in force in many jurisdictions and should be extended to all. City and county zoning are widely used for these purposes; various types of subdivision controls have been effective in assuring proper

land planning in new areas and a reasonable fit to the existing city structure. These land-use control devices are not properly developed and applied in many instances, and they are in effect in far too few jurisdictions throughout the country; nevertheless, they are legally sound and, when properly used, can prevent the misuse of the land. The application of these controls should accord with a master plan for the city. The existence of such a plan with implementing zoning and subdivision controls, if it serves as a guide for all physical changes in the structure of the city, will do much to prevent the development of substandard housing environments.

Neighborhood conservation has become a byword in housing literature. It describes an organized attack upon the forces of neighborhood deterioration in an area where housing is predominantly tolerable but where some dwellings are substandard physically or with respect to use. If the environment is not actually deleterious it is usually subject to improvement. The program of prevention is based upon the coordinated action of a majority of the property owners in the area and may involve the rehabilitation of individual structures, reduction in population density, replanning and rezoning of the neighborhood, elimination of in-harmonious land uses, opening of new streets and closing of existing thoroughfares, and the provision of parks and playgrounds. The success of the plan depends in large part on the active cooperation of a substantial proportion of the property owners of the area. It aims to utilize only the existing complement of powers in the hands of the municipality.

It should be clear that the power to prevent the creation of additional substandard housing is at hand or within easy reach, yet new slums are developing day by day. The reasons for the failure of preventive measures are much the same as the reasons for the failure to eliminate substandard housing. Our controls are too often poorly designed and insufficient in scope and have not been adopted in all areas where they are needed. Enforcement is lax and sporadic. Finally, because the advance of blight is stealthy and inconspicuous, enforcement is not supported and energized by a positive public opinion.

Conclusions on Police-power Regulation

It is clear that in the police-power regulation of housing, our states, cities, and other political subdivisions are possessed of a powerful instrument for preventing and eliminating substandard housing conditions. It is equally clear that this instrument has never realized its potentialities. There are no insuperable obstacles that bar any jurisdiction from creating the legal and administrative mechanism that can excise all bad housing and prevent the appearance of more. It is reasonable to ask, therefore,

why we have made such little progress in reducing antisocial housing conditions and whether this instrument can be useful in the future.

The examination of the past failure of police-power regulation leaves the impression that there is only one basic deficiency; that such obstacles as the apathy of the citizens, the opposition of owners, and the various administrative deficiencies can be overcome without too great difficulty. It is fundamental, however, that the enforcement of police-power controls can never go very far if enforcement aggravates the shortage of low-rent housing. Substandard housing cannot be eliminated unless there are alternative accommodations within the reach of the dispossessed families. Since enforcement produces no additions to the total housing stock but in fact reduces it, enforcement can never be effective except in a market situation where there is a surplus of low-rent housing or when accompanied by a construction program that will replace either directly or indirectly the units of low-rent housing that are actually or effectively removed.

PART V. THE RELIEF OF SUBSTANDARD HOUSING CONDITIONS BY UNAIDED PRIVATE CAPITAL

Direct Private Construction

In our considerations of the problem of eliminating substandard housing, it has become clear that the negative approach of eliminating undesirable conditions is not sufficient and that there is inevitably involved a positive side that calls for the provision of socially acceptable substitute housing at rents that the former slum dwellers can afford. We are assuming that most of this housing must be available for rent rather than for sale in spite of the fact that some of the present substandard housing is owner occupied. The question of tenure is not a central issue, since there can be no serious disagreement over the need for rental quarters for the majority of slum families. In fact, as a class, these families have little or no savings accumulated for a down payment on a home; their incomes are not only small but very uncertain; and because they are often the marginal members of the labor force, it is to their advantage to maintain a maximum of mobility in order to move readily to areas where jobs can be found.

The analysis of housing regulation has made it clear that the police power is a strong constitutional weapon for driving out antisocial hous-

ing conditions, but that it is not being effectively used. But even the enforcement and extension of this type of social control will not solve the problem; for, whereas no scheme can work unless the substandard housing is removed, it is also true that no scheme can work unless it provides alternative accommodations for the displaced families. It is an inescapable fact that the enforcement of housing codes provides no additional housing space.

We now turn our attention to the ways and means of providing alternative accommodations within the financial reach of slum dwellers in sufficient number and with sufficient speed to permit this nation to make reasonable progress in curing a widespread social evil. It is natural to look first to private initiative and private capital, for local builders and contractors have been the traditional producers of our housing facilities.

The very existence of a general slum evil and the fact that the number of substandard dwellings in most communities has been steadily increasing over the years are sufficient evidence of the past inadequacies of the normal market processes in providing decent housing for all income groups. It would appear that up to the present time acceptable housing has not been available to all families, either directly in the form of new dwellings or indirectly through the filtering-down process. If there is to be a reversal of form, and if private initiative is to provide, one way or another, directly for the needs of those families now living in substandard dwellings, there are three devices that might be used—repair or renovation of existing dwellings to bring them up to a minimum standard; conversion of existing structures to provide additional units; or new construction. Whichever be the method, the product must include a large supply of rental units of acceptable quality, available at low rents.

Reconditioning. The economic effects of voluntary renovation and repair of presently substandard dwellings are quite the same as in the case of repair that results from the enforcement of police-power regulation. We have already seen that there is likely to be a net decrease in the housing supply and that the general level of rents in the lower reaches of the market will tend to rise. The renovated units will command a rental premium above their former rate. The result of the reconditioning of slum dwellings will be a larger supply of acceptable housing, but a smaller supply of living space within the financial reach of slum dwellers. There is the further consideration that many substandard units are too far gone to justify repair because dilapidation is too far advanced or the poor basic design of the structure calls for expensive structural changes. Finally, structural reconditioning will not eliminate substandard en-

vironmental factors, nor is it a cure for overcrowding; in fact, the higher rents may increase overcrowding.

We must conclude that, while the reconditioning of substandard structures is to be encouraged as a part of an integrated program of housing reform, the process of itself is no solution, for it will provide alternative accommodations for only a small proportion of those families which were the original occupants of the renovated units.

Conversion. Conversion is the term usually applied to the process of splitting up one dwelling unit into two or more family accommodations. It is often proposed that additional dwellings needed for displaced slum dwellers be provided in this fashion. Conversion has been a common method for bolstering the productivity of the larger size single-family structures, flats, and even apartments as they become older and less desirable. It is observable, however, that, in the course of the value decline of residential properties, conversion is likely to take place well before the structure has reached the lower levels. Partial conversions, involving nothing more than the installation of an electric plate for cooking, with the bathroom shared by two or more families, represent low grade housing and should often be classified as cases of overcrowding.

The Home Owners' Loan Corporation has had extensive experience in the conversion of all types of residential structures, as well as many varieties of nonresidential buildings. It has been well demonstrated that on the average the costs of producing livable, fully equipped dwelling by this process—dwellings which, in fact, are not far above minimum standards—run much too high to permit occupancy by displaced slum dwellings without financial aid.

One of the most serious objections to the type of accommodation that is ordinarily produced by the conversion process is the small size of the units. Such dwellings are suitable only for small families and would be of little value in solving the housing problems of the many large families that now occupy substandard units. Another limitation that faces any program to encourage conversion is the fact that the number of large, old-style dwellings, whether in single-family structures, flats or apartments, is dwindling, for in recent years the average size of the housing units being produced has been decreasing. During the last depression, and particularly under the recent war housing program, a large share of all suitable structures has been converted, and in many localities only a limited number of appropriate cases now remain. On the other hand, there are many communities, particularly those untouched by war activities, where some acceptable and badly needed units might be produced by conversion, though it is very doubtful that they could be rented at levels within the reach of the low-income groups.

It may be agreed that conversion should be encouraged wherever appropriate as a sound method of adjusting older structures to the changing nature of demand. But the total number of additional dwellings that can be produced originally by this process is small relative to the needs of slum families. We may expect that most of the units so produced, if they are of acceptable quality, will be well above the lower rent levels, and that the slow-moving machinery of the filtering process will not transfer much benefit to the slum dwellers.

New Construction. As we turn to a consideration of new construction by private builders for the immediate occupancy of former slum dwellers, it will be well to repeat the general objective about which this discussion revolves. We are not discussing the ways and means for effecting a general rise in the housing standards of the working classes, however worthy that objective may be. We are concerned with a limited objective, which must be the first and most urgently needed step in any comprehensive housing program; *i.e.*, the elimination of substandard housing conditions. Our reasoning leads to the conclusion that these conditions cannot be excised unless there is alternative housing for the families that will be unhoused. Thus, we are in search of a way of providing such housing, housing that must be within the financial reach of families at the very bottom of the income hierarchy, and housing that for the most part must be available for rent.

There can be little argument over the statement that the building industry, up to the present time, has not produced new housing that has been within the financial reach of families of the economic characteristics of the current inhabitants of substandard housing. There has been housing built in which such families were the original occupants; but in recent years, at least, most of such structures have been in outlying areas, with all or part of the construction done by the owner occupant. It has been minimum or substandard housing from the start, without adequate utilities and public services, badly designed, poorly constructed, and not the kind of stuff of which cities should be made. Such dwellings make up the slums if not of the present, most certainly of the near future. No new rental housing for former slum dwellers has been produced in recent years in or about our large cities, except, possibly, for some low-grade dwellings for Negroes in Southern cities.

On the basis of past experience, then, we cannot look to private initiative to build new housing for the direct occupancy of the lowest income groups. The ability of the private builder to produce for the lowest income groups is dependent upon reductions in the various costs of occupancy, among which some, but not all, are functions of the cost of the structure. Beyond the reach of the builder to control are the costs

of raw land, taxes, interest rates, and the operating expenses that must be met by the owner. To some extent, by large-scale operation and rationalization, the builder can cut costs of producing the structure, but the prices of materials and equipment are not set by him, nor are the wages of labor. His own profit margin could be reduced, but no one expects him to operate without a reasonable reward for his efforts. All in all, the builders' power to reduce construction costs is definitely limited, and there is nothing in sight to encourage the belief that builders, though they apply great effort and ingenuity, will be able to bring down the costs of occupancy of even a minimum dwelling to a level within the reach of former slum dwellers. There is some promise in prefabrication, but present or prospective economies are far from sufficient to bridge the gap. Underlying economic trends are not friendly to the efforts that builders might make to serve a new, low segment of the market, certainly not in the near future. The general inflationary pressures and the vast backlog of demand may keep construction costs at high levels for some time to come.

In a system of free enterprise, it is expected that individual entrepreneurs will seek the maximum return for their efforts and for the risks that they undertake. In the house-building business, then, what has been the most profitable activity in the postwar period? Because of the general housing shortage, with a great backlog of demand at all income levels, the producer has had his choice. Because house builders are manufacturers and not investors, they are primarily interested in building for sale. Most of them are in no financial position to tie up their capital in rental units; further, they are not interested in the management business. As long as there is a strong demand for houses to buy for owner occupancy, and we may expect such a demand to continue for a number of years, the builders in general will find it most advantageous to serve this part of the market. Since slum dwellers are rarely in a position to undertake home purchase, they will derive little direct benefit from the activities of builders. Furthermore, the widest profit margins and the broadest markets will be found well above subsistence level. As for rental housing, some will be built by private investors and institutions seeking outlets for investment funds, but such housing will be rented at the high levels that are required by the inflated costs of construction.

Filtering Down

In the chapter on the housing market (Chap. 11), the filtering process in the housing market was described and analyzed. The question of whether or not this process can or will provide adequate housing for the lowest income groups is a central issue in the determination of public

policy. It is a widely held belief that, if the house builders will construct new housing in sufficient quantity for the middle and upper income groups, a supply of older housing will be released and ultimately will find its way to the bottom of the market to provide for the poor. It follows that there is no need for building housing directly for the lower income groups, *i.e.*, for subsidized public housing.

The testing of this argument is presented at some length in Chap. 11. The conclusion is that filtering is a totally inadequate remedy for the problem of substandard housing. In the past, slums have spread in spite of the filtering process and, in fact, largely as the end product of filtering. Filtering cannot be forced; it is not suitable as a controllable instrument of public policy. Thus an understanding of the economics of the housing market reveals the fallacies of counting on filtering to eliminate substandard housing conditions. In times of shortage such as have plagued the postwar period, all the forces of the market act to inhibit filtering; in fact, concomitant with price inflation we have witnessed filtering upward, with housing of given quality moving away from rather than closer to the reach of the lowest income groups. It will require many years of house production to supply the needs of the upper and middle income groups, with no provision for the release of housing to begin its slow downward movement.

PART VI. SUBSIDY DEVICES FOR RELIEVING SUBSTANDARD HOUSING CONDITIONS

The Rent Certificate Scheme

We have now considered the probability of accomplishing the amelioration of substandard housing conditions through the natural market processes of production and of filtering and we have found little encouragement. The police-power regulation of housing offers, of itself, a highly inadequate solution. We now turn to a frequently recurring proposal that we undertake to supply the present occupants of bad housing with the purchasing power, through a subsidy device, to enable them to compete successfully in the private market for acceptable housing.⁸

It is a common and somewhat persuasive argument that bad housing, like malnutrition or inadequate clothing, is primarily a manifestation of poverty. It should follow, therefore, that the solution is increased family

⁸ For a discussion of subsidies, see "The Subsidy and Housing," an article by Charles Abrams in the *Journal of Land and Public Utility Economics*, May, 1946.

income or, if housing be considered alone, increased ability to meet housing costs. As a practical matter, it is recognized that public assistance is required, but rather than to subsidize total family income, thus depending upon the family to determine the disposition of the subsidy among the various items in the family budget, it is proposed to direct and limit the financial aid to the provision of acceptable housing accommodations. The device to be used is referred to as a "rent certificate," which, in effect, is a blank check given by a public body to families living under substandard conditions to permit them to rent acceptable housing. The public body pays the difference between the contract rent for a decent dwelling and the amount that the family can afford to allocate for housing out of its normal income. It is assumed that the aided tenants will find accommodations in the existing stock of older structures, for, it is argued, this is the normal and natural source of housing for the lower income groups.

Results with Supply Constant. It is generally understood that only those families presently living under substandard housing conditions would be eligible for assistance under the rent-certificate plan. The plan also requires that the certificate may be used only to acquire housing space that meets a minimum standard of quality. But what of the housing that is vacated by the aided family? If there is an adequate supply of low-rent housing, the vacated units, being of the lowest quality, will tend to remain vacant and may eventually be withdrawn from the market through closure or demolition by their owners. But under conditions as they actually are, these units will not be removed, for shortage of supply, not surplus, is typical of the low-rent market in most communities, a shortage that has been sharply accentuated during these early postwar years.

The rent-certificate plan, if it is to work, will permit families to pay whatever price is necessary to acquire housing meeting the minimum standards. In a shortage situation, the aided families will be provided with the economic power to outbid those families now living in units that are above the line of tolerance and will force them to find other quarters. Since these ousted families, in most cases, are already paying as much for housing as they can afford, their only choice is to move into the very substandard units that the aided families have vacated with the aid of subsidy. There will be a general exchange of dwellings, which will end up with the families that can afford decent housing living in the substandard units and the families that require assistance living in the acceptable dwellings. Families of minimum income will have better housing than families of somewhat higher income, a situation parallel to that which is sometimes found objectionable in the case of new public

housing. Finally, the new occupants of the substandard units will probably pay a higher rent than the previous inhabitants, since the new families have higher incomes; in the face of shortage, the landlords can charge what the traffic will bear, which, for these families, will be somewhat more than could be borne by the original group. It is obvious, then, that, in the presence of a shortage of low-rent housing, assuming a relatively constant supply, the rent-certificate scheme will succeed in inducing an irrational and undesirable exchange of dwellings; it will tend to raise the rents for the substandard dwellings, and it will not reduce the number of cases of antisocial housing conditions.

Integration with Police-power Controls. It would seem that, if there is to be any progress toward the elimination of substandard housing under the rent-certificate plan, something must be added. There is no social gain in raising the housing standard of one group of families if the substandard units that they have vacated are immediately taken up by a new group. It would seem necessary, therefore, that the rent-certificate plan be integrated with a program of enforcement of police-power regulations. It has already been pointed out that the enforcement of housing regulations when alternative accommodations are not available will reduce the available supply of low-rent housing, tend to raise rents, induce additional overcrowding, and encourage the creation of new slum areas. Certainly the short-term effect of enforcement will be in this direction even when the dispossessed families are given the benefits of the rent certificate.

Influence on Rent Levels. Before exploring the probable long-term effects of the rent-certificate plan, it will be well to understand the repercussions of the plan on the rent level. If the rent-certificate plan is not accompanied by a program of rehabilitation and demolition, and if there are no additions to the supply, *i.e.*, if supply is held constant, the only effect on rents will be that already described, an increase in the rents of substandard units. On the other hand, if the effective supply of low-rent units is reduced through the enforcement of police-power regulations, there will be a general tendency to raise rents throughout the lower levels of the market. Enforcing this tendency will be the pressure on the agency administering the rent-certificate plan to find housing for the beneficiary families and to pay whatever rent is necessary to accomplish that objective. It may be suggested that, by law or regulation, administrative officers might be limited to market price in approving rent certificates. But such a policy is not practicable, for in the face of a shortage of low-rent housing and with a limitation on the amount of the bid, the administrative officers would be hard put to it to find even a few units at the lower end of the quality scale, above the minimum standard, and

available for occupancy by the aided families. In order to find any substantial number of available dwellings, it would be necessary either to outbid present occupants of low-rent units or to rent units of higher quality, which might be found in the upper ranges of the market where shortages are usually less severe. The result of subsidizing high rents for families of very low income would be a heavy financial burden, which might render the scheme impracticable. In short, if the rent-certificate plan is to work in the face of a shortage, the probable result will be a general rise in rents for low-rent units above the minimum standard. As a result, those families which are already paying as much as they can for housing that just meets the standards of decency will find that they can no longer afford decent housing and will create new slums. To the extent that the inflationary effect of the rent-certificate scheme is felt throughout the housing market, the solvent citizens will not only have the burden of subsidy on their backs but also will be squeezed by higher housing costs.

Long-run Effects. In examining the long-run effects of the rent-certificate plan, it is this very inflationary effect which is most significant. The question is whether or not the increased level of rents will create an incentive for additional construction which, in time, will be sufficient to bring the rent level back to normal and provide, through the filtering-down process, a sufficiency of housing for all income groups. We have had, in many cities, a shortage of low-rent housing for a long time without an adequate adjustment having been made through the market mechanism. It is now proposed to introduce the rent-certificate device, with the result that a portion of the families constituting demand at the lower end of the scale will be enabled to raise their bids. If the amount of this raise is small, it will have little effect on the rate of new house production, since the price (rent) offer is so far below the level at which new housing ordinarily enters the market. If the amount of the raise is great, the reaction will be somewhat more rapid and of greater degree, but the burden of subsidy will be correspondingly heavier.

The mechanism of the housing market operates slowly and imperfectly. Not only must the effect of increased purchasing power at the bottom of the market find its way upward to the point where new construction will be produced, which is a time-consuming process and involves innumerable individual transactions, but also the strength of the force will be greatly diminished and diluted by the time it reaches that point in the market. The benefits of that new construction which eventuates will also be slow in reaching the bottom of the market through the process of filtering down. The imperfections of the filtering process have already been discussed. The conclusion must be that the rent-certificate plan can pro-

vide no immediate relief of substandard housing conditions through the stimulation of new construction. Relief, if it does come in the long run, will be greatly delayed and disproportionately small relative to the input of subsidy.

It has been suggested that the rent-certificate plan would encourage landlords to renovate and repair low-rent dwellings beyond the minimum required under the local housing regulations and to maintain their properties in acceptable condition in order to be eligible for occupancy by aided tenants. If, under the normal conditions of a shortage of acceptable housing at low rents, landlords are not impelled to rehabilitate and maintain their properties, it would seem that they would not be impelled to do so by the presence of rent certificates unless rents could be obtained that were above the existing market level. Thus it would be necessary for the public agency to pay rents in excess of original market rents for the reconditioned dwellings in order to encourage maintenance, repair, and rehabilitation beyond that which would normally occur without special stimulation. The social cost of such a premium might possibly be justified in terms of improved quality of low-rent housing.

Conclusions on Rent Certificates. This discussion of the rent-certificate scheme has been restricted to an economic analysis of its effects within the housing market. There are other limitations which are often urged, but which will not be appraised here. For example, social-work experts are agreed that the plan is undesirable and public administrators point out a number of obstacles to the effective and economical administration of the scheme. No one has properly appraised the financial cost of the plan relative to other methods of relieving substandard housing conditions, though such a comparison would be highly significant. Finally, it may be said that, since the plan accomplishes nothing unless accompanied by a program of enforcement of adequate police-power regulations, its success hinges upon securing proper enforcement. The difficulties of enforcement already have been discussed.

The basic deficiency of the rent-certificate plan is that it does not produce additional housing for low rent; it would have the effect of maintaining the profitability of slum areas and retarding their elimination. Even in the long run, within reasonable limits of cost, it can do little to stimulate enough new construction to accomplish much when the long-delayed effect has finally worked its way back to the low-rent levels. The plan could be of benefit in encouraging the reconditioning and maintenance of some of the slum housing, but the cost is a rent premium for acceptable housing. The plan will tend to raise the rent level, particularly at the lower reaches of the market, and will thereby increase the number of families that cannot afford to pay for decent housing; this has the

effect of increasing the number of families that are eligible for rent certificates, and the more rent certificates in circulation, the stronger the inflationary effect. In short, the rent-certificate plan as a solution to the problem of substandard housing can be truly effective only under conditions of a market surplus of low rent but acceptable housing, a condition which will be rare among our communities in the postwar era, and which, when it exists, greatly diminishes the need for housing assistance of any kind.

Subsidy to Private Building Operations

Any form of subsidy to be used in the attack upon substandard housing must have the final result of closing the gap between what the slum families can afford to pay for housing and the economic rent for the new units. We have seen that aid can take the form of the rent certificate, which is a kind of deficit subsidy at the family level. The United States Housing Act of 1937 provides for a deficit subsidy at the project level.⁹ Under its provisions, an annual contribution can be made equal to the difference between the total rental income from the tenants, who are charged no more than they can afford, and the total of operating costs and debt service. To meet this deficit, a Federal annual subsidy is authorized and localities are required to make contributions in the form of capital grant of land, money, or services, or in the form of tax exemption. Whatever the nature of the housing subsidy, whether directly to the tenant or through the project to the tenant, the effect is to make up the difference between ability of tenants to pay and the real financial burden of the housing operation.

Why, then, should we not apply this form of subsidy in the case of new housing built by private capital in order not only to provide alternative accommodations for slum dwellers but also to avoid the necessity of putting the government in the housing business? Must the use of subsidy be limited in application to public housing? It is sometimes urged that if private operators were to be provided with all the various facilities and benefits that are available to local housing authorities in operating under the provisions of the United States Housing Act, the private operators could provide the needed housing just as economically, if not more so, than the public bodies. It is pointed out that public bodies are assisted by the powers of condemnation in land acquisition and can borrow money at very low interest rates.

This is the point at which the taxpayer's interests must be controlling. If we are going to subsidize housing, he will pay the bill, and his concern

⁹ Public Law 412, 75th Congress.

is that the job shall be done in the most economical manner consistent with the attainment of the objectives. The citizen is also concerned that the job shall be done as promptly as practicable. Granting that the facilities of the private building industry shall be used to the maximum consistent with economy, the basic question is what method of providing and managing low-rent housing will get the job done properly and promptly at the lowest annual cost.

If we are to appraise the practicability of providing subsidized housing in new privately owned and operated rental projects, it is important to understand how private rental projects are ordinarily produced. Such projects are frequently promoted and owned by the organization that does the construction work. Contractors sometimes accept a part interest as partial payment for their services. The entrepreneurs are occasionally investors seeking a profitable outlet for their capital; sometimes they are owners of land that is ripe for development. It is significant that under the rental housing program of the Federal Housing Administration, equity capital dried up substantially when legislation was passed that made it difficult to water the capital stock and thus earn a very large return on the actual cash equity. The fact is that no large volume of rental housing has been built in large-scale projects except in anticipation of speculative profits. In the exceptional case of rental projects built and owned as objects of direct investment by financial institutions, the return expected on the total outlay can be no less than 4 to 5 per cent, which is 2 to 3 per cent higher than the taxpayer must pay for money that is invested in public housing projects.

In the building of a private rental project, the promoters are in the same position and perform substantially the same functions as the local housing authority performs in the construction of a public project. These functions include providing or arranging for the equity capital, planning the operation and drawing together the various productive elements, borrowing the funded debt, letting the contract for construction, and managing the project. The questions to be considered are, first, whether a private operator or investor, with all the aids available to a local housing authority, who undertakes to provide the housing services required as a part of a program to eliminate substandard housing conditions can provide such housing at an equal or lower subsidy than can a public agency. The second question is whether any private operators would be interested in a deal of this kind. Both of these questions can best be answered on the basis of a step-by-step analysis of the processes of production and management. If we are to take the taxpayer's viewpoint, we must assume that the private operator or entrepreneur should be paid

only for those services which he performs and that he is to be preferred only when he functions as efficiently as some public agency. The more fundamental question of whether private enterprise in the housing field should be supported in preference to public activity regardless of cost is another issue, which must not be confused with the present purely practical approach to an analysis of the relative burdens of subsidy.

The Planning Function. Among the traditional entrepreneurial functions are the discovery and analysis of opportunity and the planning of the operation. In the case of slum replacement housing, the discovery and analysis of need is naturally and logically a public function. The need arises out of a public determination to rid the community of anti-social housing conditions. An analysis and identification of this need is a necessary part of the formulation of public policy.

The planning of low-rent housing projects has become a somewhat specialized process growing out of the unique framework of objectives and financial considerations. Such projects are not built for the competitive market, for their occupancy is assured. They are built for a longer life than is usual for private rental housing and with more emphasis on utility and low maintenance costs. The project must be planned to provide services and facilities that reflect the special needs of the low-income families that are to be housed. There is no reason to believe that private operators could not supervise this type of planning as well as local housing authorities. The fact is, of course, that in either case much of the land planning and architectural planning is done by professionals hired for the purpose. On this point, therefore, there would be little difference in the long run between the private and public agency. It could be argued, however, that at the present few private operators are familiar with the planning requirements of low-rent housing, whereas Federal and state housing agencies and many local housing authorities have already had considerable experience, not only with planning projects but in seeing the plans tested in operation.

Risk Taking. Risk taking is a primary function of the entrepreneur, but in subsidized housing there is actually no risk. Full occupancy is guaranteed by the large numbers now living under slum conditions; the subsidy would guarantee constant and predictable returns. An entrepreneur might have to provide equity money equal to 10 to 20 per cent of the total capitalization but, as explained, this would be relatively riskless investment, and the taxpayer would not be justified in paying a return to the investor of more than 2.5 or 3 per cent. If a higher rate were allowed, and there is little doubt that a higher rate would be required to attract equity capital, then the proposition would be unfavorable

in comparison with the cost of money to the municipality, which, in the case of a public project, would supply the equity.

Borrowing. Either the private operator or the public agency would be required to borrow most of the capital required to build the project. The United States Housing Act provides for loans up to 90 per cent of the capital requirements, but in recent years most of this borrowing has been done in the private money market rather than from the Federal government. It would be costly to the taxpayers who bear the subsidy burden if full advantage were not taken of the public credit in the financing of the low-rent housing. Thus, the private operator would have to call upon the municipality, or some governmental agency, for assistance in securing funds at low interest rates and for long term and could not be credited with performing an independent function in arranging the financing.

Contracting. The actual construction of the project is done by a private contractor in almost all cases, whether the project be public or private. Competitive bidding is employed, and there is no reason to believe that the actual building operations would be at different levels of efficiency. However, it is often argued that the inevitable red tape, delays, and supervision on a public project create extra costs that are not present in strictly private projects. But there would be little difference in the case of privately owned and publicly subsidized low-rent projects, for the taxpayers' interest in maximum economy would lead to a considerable and onerous supervision.

Management. Low-rent projects have many management problems that are not encountered in rental housing for higher income groups. For example, the selection of tenants must be carefully done in order to avoid charges of discrimination and in order to be sure that subsidies are not wasted on families that are presently living under acceptable conditions or could find and afford decent housing. The approach is that of the social worker and requires the case-study technique. This type of operation is foreign to the experience of the private operator and usually not of interest to him. Not only must the financial status of the tenant be carefully analyzed at the time he moves in, but there must be a review of these matters periodically to determine whether there have been changes in his income that might render him ineligible for occupancy. Furthermore, because of the nature of many slum families, it is a necessary management function to assist in the social rehabilitation of the tenants through various project services and tenant-training activities. It would be a fruitless expenditure of public monies to provide decent housing for slum families without educating them in the better way of life that

their new environment makes possible. Such a function is not normally performed in projects under private management.¹⁰

The private operator would be required to submit to the careful scrutiny by public officials of each step in the operation from site selection on through the years of management. The taxpayers' interests require that the initial capital costs be kept at a minimum and that the project operating costs be as low as is consistent with the attainment of the primary objectives. Such regulation would be distasteful to many private operators and would add an additional item of cost, which would be at least partly avoided by direct public operation.

In summary, the analysis of functions suggests that the only parts of the building and managing operations that might be done more efficiently by a private operator are the planning and supervising function, in cases where the private operator is more experienced in large-scale developments than the local housing authority and where his experience includes the planning of low-rent housing projects; furthermore, under some circumstances, the private operator might be able to secure the site more expeditiously and economically than a public agency. In general, however, the private operator performs no important function that the public agency could not undertake with equal or greater effectiveness either within its own staff or by hiring a private practitioner for a fee. The entrepreneur takes no risk and has no profit incentive. He is simply an investor with a small equity in the project, assured of a limited interest return and the replacement of his capital. He must seek the intervention of a public agency in his borrowings and, in many cases, in the acquisition of a site. He lets a contract for the construction of the project, as well as for the architectural design, in precisely the same manner as does the public agency. He is called upon to perform specialized management functions which are foreign to his experience and which are of a nature traditionally performed by public social-work agencies. He is subjected to necessary supervision and regulation that are irksome and costly; the return on his capital is limited, and all opportunities for large returns or speculative profits are eliminated. There seems to be no incentive that would lead a private operator to undertake to build subsidized low-rent housing under the limitations and restrictions that are legitimate and necessary if the interests of the

¹⁰ For a good discussion of many of these points, see the passage between Senator Robert Taft and Philip M. Klutznick, FPHA Commissioner, as reported in the Hearings before the Subcommittee on Housing and Urban Redevelopment of the Special Committee on Post-war Policy and Economic Planning, U.S. Senate, part 8, Housing and Urban Redevelopment, Jan. 11, 1945, pp. 1573-1583 (Washington, D.C.: U.S. Government Printing Office).

taxpayers are to be protected. In the postwar years, when there are pressing demands for rental housing in the middle and upper rental ranges, there is no reason for a private operator to enter the low-rent field. The economies of private construction, even granting maximum attainment, would be more than offset if private operators were to be permitted to secure a return on subsidized housing sufficient in amount to attract private capital into such an investment. From the taxpayers' standpoint, there seems no reason to subsidize not only the tenant but also the private operator in order to induce him to provide housing that a well-run public agency could provide at a lower social cost.

The Public-housing Formula

The judicial opinions that have established the building and operating of public housing as a proper governmental function have all been based upon the reasoning that the failure of private enterprise to supply acceptable housing at rents within the reach of low-income families stands as a prime justification for governmental intervention. It is perhaps more than a tacit assumption of the jurists that private initiative, in the future, will not supply such housing, either directly or indirectly. The courts apparently have been convinced by arguments that decent housing must be produced directly by governmental agencies for the present occupants of substandard dwellings if the social menace of slums and overcrowding is to be abated.

The United States Housing Act of 1937 established that pattern which, among the proponents of public housing, has been accepted as the most workable and economical plan for assisting localities in eliminating substandard housing conditions.¹¹ There were earlier small-scale abortive programs, but it was not until the benefits under the 1937 legislation became available that any substantial progress was made. It is significant that the formula that it implements, after a thoroughgoing test in all parts of the country and in communities of all sizes and conditions, has been generally accepted by housing administrators as the most desirable pattern for social action in this field and that no substantial amendments were proposed for the expanded postwar program incorporated first in the General Housing Act of 1945 (S. 1592), in the National Housing Commission Act (S. 866) and in the administration-supported housing bills introduced in January, 1949, at the opening of the 81st Congress. The major provisions of the United States Housing Act of 1937 have already been outlined. The basic scheme is to employ a subsidy from Federal and local agencies to make up the difference be-

¹¹ Public Law 412, 75th Congress.

tween the ability of low-income tenants to pay for housing and the actual costs of decent accommodations that are provided in projects owned and operated by local public agencies. For each new dwelling unit built there must be one substandard dwelling eliminated either by demolition or rehabilitation.

A specious distinction is sometimes made between clearing up slums and providing housing for families of low income. One of the chief apologists for public housing, Nathan Straus, has said, "The purpose of public housing is not to wipe out slums but to provide good homes and healthful living conditions for low-income families."¹² As pointed out earlier, the judiciary does not agree with this emphasis, since the courts have supported the constitutionality of public housing only as a necessary adjunct to a program of eliminating dangerous housing conditions. The act itself expresses the complementary character of these two objectives in its provision for equivalent elimination. It seems clear that the primary motivation has been, historically, the amelioration of living conditions that are socially dangerous and distasteful. Police-power controls were the first devices that society developed as the most direct method of excising the disease. This method failed for reasons already explained, and the public-housing instrument was employed in an attempt to accomplish the original objective. Certainly, society would not support the financial burden of public housing to supply socially desirable housing for the low-income groups if the complementary effect were not the abatement of socially undesirable conditions.

There is little question but that, as far as the mechanics of the device are concerned, the United States Housing Act of 1937 provides the necessary machinery for making effective a local program for eliminating substandard housing conditions. Under its provisions, local housing authorities can provide alternative accommodations for slum dwellers at rents that they can afford to pay. Within the limits of the additional space provided, the community may enforce housing regulations where enforcement results in displacement of families. Only financial limitations would prevent the complete reduction of substandard housing in any community that undertook a coordinated program of housing regulation and public housing.

Competition with Private Capital. Almost all the criticism of public housing is based either on administrative errors and awkwardness in effectuating past public-housing programs or upon a general opposition to the extension of governmental activities. Few thoughtful persons,

¹² Straus, Nathan, *The Seven Myths of Housing* (New York: Alfred A Knopf, Inc., 1944), p. 48.

regardless of whether they favor public housing, have argued that the formula, properly administered, cannot ameliorate substandard housing conditions. This discussion does not concern itself with administrative sins, for, presumably, it is within the power of the citizenry to procure efficient and reasonable administration of public housing or of any other public activity. Neither are we here concerned with political or economic philosophies, for our democratic machinery is capable of making choices. Our concern is with the pure mechanics of the market and with the workability of the several alternative schemes that are proposed as solutions to this serious social problem. However, the contention that public housing competes with private capital should be subjected to economic analysis at this point.

The opponents of public housing have long contended that it competes with the private building industry. The question here is whether public housing under the formula contained in the United States Housing Act of 1937 supplies a demand that would otherwise be supplied by unaided private enterprise. There is no real evidence that direct competition exists; *i.e.*, that private operators could or would build new dwellings directly for families now living under substandard housing conditions. Certainly, the language of the act is designed to bar such competition, and if it does take place, it is the result of maladministration. "Families of low income" to whom the benefits of the act are limited are defined as those families for which private enterprise is not supplying decent housing, presumably either new or used.¹³ The basic fact is that it is not possible to build low-rent housing at costs that would permit commercial rents to be set within the reach of slum families.

Not only does public housing serve a market of little direct concern to private builders, but, in fact, public housing is privately built. Contracts are let at a public bidding and the construction is done by a private contractor. Furthermore, recent experience indicates that in the future all the borrowed capital will be supplied by private investors in the private money market. But competition can be indirect as well as direct, and it may be argued that every dwelling built under the public-housing program and added to the general housing stock means one less dwelling that otherwise would be provided by private operators even if not originally available to low-income families.

Certainly it is true that public housing involves the substitution of dwellings that are publicly owned for dwellings that are privately owned

¹³ The General Housing Act (S. 1592, the Wagner-Ellender-Taft bill, which failed of passage in 1946) and the successor bill, S. 966, provide for a gap of 20 per cent between the bottom of the rental market served by private enterprise and the top of the market to be served by public housing.

and the replacement of private capital by public investment. But the nature of this competition from a social viewpoint must not be overlooked. The substitution of capital is accompanied by a substitution of wholesome housing for foul and wretched housing; by the supplanting of dwellings that for the most part are operated illegally in violation of regulatory codes by a living environment that is socially beneficial. It is well established in relation to certain other areas of private business that violation of the law carries with it a forfeiture of certain normal rights and privileges. For example, the owner and seller of tainted food must destroy it without compensation. But in the housing field, such a social attitude has not yet crystallized, probably because the social dangers of bad housing are less obvious and more indirect than the social dangers of contaminated meat.

Another feature of the competition of public housing with private investment is that the private capital that is replaced, having the physical form of old structures that are occupied long after their normal useful life has expired, under proper accounting practices, has a book value that approaches zero. A reasonable charge for depreciation made against gross revenues during the normal life of the structure, in many slum properties, would have written off the original investment long ago. This statement does not mean that slum owners, in general, have retired their investments out of earnings, for slum properties change hands frequently and many present owners have paid prices based on future productivity and have not received as yet a return of their investment. The point is simply that, viewing slum properties as a physical asset without regard to ownership, the productivity over the extenuated term of occupancy that characterizes such properties has been sufficient, and often more than sufficient, to retire the original investment and in addition to pay a reasonable return on the capital. A further point is that the continued profitability of operating slum properties is often based on neglect of repairs and replacement; *i.e.*, the milking of the property at the expense of the safety and health of the occupants. These points, once recognized, lead many people to conclude that the system of private enterprise will not be violated by competition that replaces investments which can be considered already retired, which are often not profitable when operated under a businesslike and sound policy of repair and replacement, and which have physical expression in socially dangerous and usually illegal housing.

Failure to Pay Taxes. The opponents of public housing have objected to the provision of the plan that permits the local projects to pay, in lieu of local taxes, something less than the full equivalent of a tax payment based on a normal assessment of the projects. It is argued that

such a privilege is unfair to other property owners and that the project does not meet the costs of public services. This argument ignores the fact that public housing is not intended to pay its own way and that the statute requires that the locality make some contribution to meeting the deficit. The abatement of taxes is the easiest form of local contribution, though the same effect might be accomplished by charging full taxes and making a cash contribution out of public funds. The burden on other taxpayers would be the same in either case. It would seem, therefore, that the opposition to tax abatement on public housing projects is, in fact, opposition to any local contribution to the subsidy burden.

Other Alternatives

We have now considered the leading proposals for the elimination of substandard housing but there are two additional lines of reasoning that should be appraised before the subject is closed. One argument is that reduction in housing costs through construction economies or lower operating costs will relieve the antisocial conditions at the bottom of the market. Another proposal is to build low-rent or low-cost subsidized housing on open land and to drain the slums until slum values are so deflated that the rebuilding of slum areas can be done at reasonable cost.

There is no basis for predicting a substantial reduction in the costs of shelter within the next few years. Costs of construction are greatly inflated and will remain relatively high during the building boom. The avid demand for housing offers little incentive for economies in production and competitive price cutting among producers. Even the evident economies of large-scale production will not be passed on in full to the buyer as long as demand exceeds the productive capacity of the house-building industry. There are no dependable prospects of lower costs of money, lower taxes, or lower operating costs. While the reduction of building costs offers the greatest potentiality for reducing the burden of shelter, it will be recalled that a 20 per cent reduction in original investment in a house means only a 12 per cent reduction in the annual cost of shelter. In general, shelter costs in company with the rest of the cost structure are to be higher rather than lower relative to incomes for some time to come. In the long run, we have reason to hope that technological advance and the rationalization of the industry will cut construction costs, but the cut would have to be far greater than we can reasonably expect if it will permit new building for the immediate occupancy of present slum dwellers. The benefits of reduced construction costs will be indirectly felt at the bottom of the market. In so far as lower costs cause a downward adjustment in the whole value structure of the housing stock, slum dwellers may receive some

benefit. But the benefit will be small and in many cities will be negligible; rents for slum properties are set primarily on the basis of what the traffic will bear; *i.e.*, the incomes of the tenants. This situation exists because of the monopolistic position of slum landlords and because of the lack of flexibility in the very low incomes of the tenants. Thus a shift in the capital value of slum properties will have no short-run influence on rents and very little, if any, long-run effect.

But even if some small rent reduction would result at the bottom of the market from a reduction in the costs of construction that was introduced at some higher level—an unlikely occurrence—there could be no elimination of substandard housing conditions until the slum dweller were offered some alternative housing space. Thus we get back to the familiar and inescapable fact that provision for alternative housing can be made only by direct construction or by filtering. In the present connection, the greatest hope we can offer is that a cost reduction would permit the introduction of new housing at a lower level and that the time dimension of the filtering process might be somewhat reduced.

The plan for clearing slums by deflation is usually proposed as a method of avoiding the excessive cost of acquiring blighted areas for redevelopment, whether through public or private action. Variations of the proposal range from a policy of inaction until the structures become uninhabitable and the property owners abandon all hope, to a positive program of public housing built on open land to drain the slums of the unhappy inmates. The first variation is the counsel of despair and is simply a perpetuation of past policy or lack of policy. The second scheme is mechanically sound if accompanied by a program of enforcement of police-power regulations. Thus as alternative space is provided in subsidized housing in outlying areas, the enforced repair or closure of illegal slum properties can proceed. In due course, assuming an adequate housing code, all substandard housing will be eliminated, much of the worst housing will have been demolished, and the remaining slum-property owners will find their monopolistic position somewhat weakened. At this point, it will be much less costly than originally to acquire large areas suitable for the creation of new residential or business neighborhoods by either public or private action. This process is, of course, within the intent and the potentialities of the accepted public-housing formula, although it does not involve the immediate and more spectacular clearance and direct replacement of slums that many people associate with public housing.

Conclusions on the Abatement of Substandard Housing Conditions

The elements of an effective plan for ridding our communities of substandard housing are few and simple. The bad housing must be removed and acceptable housing made available within financial reach of the slum dwellers. But the alternative shelter must come first unless we are to throw these families into the streets. In the past, the housing market has failed to provide decent dwellings for the lowest income groups; and there is no prospect that the future will soon bring any different result. In so far as filtering down has provided for this large group of our fellow citizens, it has provided unacceptable housing, altered from its original form, overcrowded, and milked by the owners. There is no supportable argument that filtering can be forced or controlled; there is no reason to believe that the present building boom will clear our slums any more effectively than did the last building boom.

The basic economic obstacle to the provision of acceptable housing for the poor is simply that a decent dwelling is too large and complicated an article to allow for production at a low enough cost. Subsidy is a device that overcomes this obstacle at public expense. Whether the social gain is worth the price is beyond the purview of this discussion; it is a matter for democratic determination. Among the various subsidy devices, the public-housing formula appears to be the most workable and the most economical. It involves no direct competition with private builders, but it does constitute a general kind of competition with private entrepreneurial investors, for it replaces privately owned slum properties with housing of good quality that is publicly owned though privately manufactured and financed by private loans.

What would be a reasonable approach provided that by democratic methods the public-housing formula was declared to be acceptable? At the start, the objective should be strictly defined. It is not sufficient to aim at the elimination of "substandard" housing; the term must be given dimensions. It would seem most logical to define substandard housing as that housing which is in violation of local housing codes. Thus, for each community a different definition would obtain, one which was arrived at democratically and which could, if the issues were squarely placed before the citizens, reflect the local evaluation of the social dangers and costs of bad housing. The first step in a local program to get rid of slums would be to revise the housing code and to set the goal as the elimination of all illegal housing conditions. To be fully effective, the housing code should apply over the entire housing market area including central city and suburbs.

The next step would be the enforcement of the housing code as far

as practicable; *i.e.*, short of putting families in the street, recreating slum conditions in another part of the area, and raising rent levels. In most communities, some enforcement would be practicable, for there is illegal housing now occupied by families that could afford better accommodations if such were to be found. Some of these units could be rehabilitated without necessitating eviction and without raising rents beyond the reach of the occupants. In most localities, the enforcement machinery would have to be improved.

The full enforcement of an adequate housing code requires that alternative housing be available, but the source of such alternative space is unimportant. Therefore, the locality would look to all sources—new private construction, used dwellings, and public housing; resort to public housing would be made only when other sources were shown to be inadequate. For the administration of the program, a continuing analysis of the housing market would be required so that the public-housing program could be terminated when a balance in the lower ranges was in sight. If market analysis indicated the presence of a surplus of housing just above the level of tolerance, it would be possible to substitute the rent-certificate plan for public housing up to the volume of such surplus.

The approach suggested here is different from that which is common among public housers primarily in scope and point of view. It is here proposed that each locality shall decide what kind of housing it wishes to remove, define this housing, and make it illegal. Where enforcement of the housing code is impracticable, positive steps should be taken to provide alternative accommodations, using public housing as an emergency and marginal device. If private builders or the filtering process can provide low-rent housing of acceptable quality, no public housing is required. If not, then the amount of public housing that is needed becomes the measure of the inadequacy of normal market processes in providing decent housing for all.

INDEX

A

Agricultural surplus and urbanism, 30-32
 Amortization, 224
 Assessed values, 424-425

B

Banks and trust companies, 246-247
 Bidding, competitive, 179-180
 Bonds, collateral trust, 231
 mortgage, 230
 Brokers, real estate, 291-293
 Builders, characteristics of, 182-187
 Building (*see* Construction)
 Building and loan associations, 241-246
 Building industry (*see* Construction industry)
 Building labor, 189-199
 Building land, cost reduction, 473-475
 Building lots, excess subdivision, 307-308
 history of subdividing, 306-311
 lack of controls, 309
 market, 306-312
 present tendencies, 311-312
 Buildings, construction of, 175-206
 types of, 303
 Business centers, outlying, 389-391
 Business district, central, 387-388
 Business thoroughfare, 388, 392-393
 Buyers in the market, 291
 Buying habits, relation to retail location, 377-379

C

Capacity, 354
 Capital, working, 187, 209
 Capital-cost combinations, 353-355
 Capital costs, land utilization, 350
 reduction, 468-478

Capital improvement, determination, 289
 Central business district, 387-388
 Changing factors of urbanization, 46-51
 Cities, early forms, 21-24
 economic base of, 42-46
 functional variation, 39-41
 future growth, 55, 56
 location of, 33-34
 population by city size groups, 54
 United States, 51-56
 variations in social characteristics, 76-78
 City growth, 397-405
 economics of succession, 403-405
 internal shifts, 399-400
 lateral expansion, 398-399
 residential areas, 400-403
 City planning, 409-413
 relation to market forces, 384-386
 City structure, 386-397
 Collateral trust bonds, 231
 Community business areas, 389-391
 Competition of land uses, 370-371
 Construction, nature of operation, 175-176
 Construction financing, 222
 Construction industry, 146-163
 cycle history, 1918-1946, 159-163
 cyclical characteristics, 154-155
 cyclical factors, 156-159
 cyclical movements, 153-154
 cyclical sequence, 155-156
 general nature, 146-147
 importance in national economy, 149-153
 prefabrication, 203-206
 rationalization of housebuilding, 199-203
 Construction labor (*see* Labor, construction)
 Construction materials, 187-189

- Construction process, 179-187
 - characteristics of builders, 182-187
 - competitive bidding, 179-180
 - general contractor, functions, 180-182
 - residential builders, 185-187
 - working capital, 187, 209
- Convenience-desirability, relation to retail location, 379-381
- Conversion, 504-505
- Conveyance of title, 14-15
- Cooperatives, 109-110
- Costs of friction, 371-373
- Costs, housing (*see* Housing costs)
 - land utilization, 349-353
 - capital costs, 350
 - costs during construction, 350
 - depreciation, 352-353
 - operating costs, 352
 - ripening costs, 350-351
- Credit, demand, 233-235
 - forms, 210-221
 - functions, 207-210
 - sources, 234-237
 - working capital, 209
- Cyclical aspects, construction industry, 153-163
- Cyclical fluctuations, housing market, 334-345
 - cyclical sequence, 338-341
 - instability, 343-345
 - market indicators, 335-337
 - recent history, 341-345

D

- Debt, mortgage, 238-240
- Deed restrictions, 169
- Demand, for housing, quality, 97-122
 - quantity, 88-96
 - for industrial space, 139-143
 - for land, relationships to social characteristics, 85-86
 - for office space, 133-136
 - for public and semipublic use, 143-145
 - for retail space, 123-133
 - for wholesale space, 137-138
- Depreciation, 352-353, 481-484
- Description, land, 5-6
- Design function, construction operations, 176-179

- Deterioration, 482
- Detroit plan, 433
- Differential returns, 353-355
- Direct investment, 232, 250
- Direct-reduction plan, 242
- Doubling up, 92-93

E

- Economic base of cities, 42-46
 - diversification, 45-46
 - forces of change, 43-45
- Economic characteristics, urban land, 281-284
- Economic rent, 362-363
- Efficiency in development costs, 354
- Eminent domain, 17-18
- Entrepreneurial calculation, 355-362
- Environment, control, 499-500
- Environmental change, 483
- Equity, 210
 - of redemption, 213
- Excess subdivision, 307-308
- Existing space, distribution, 284-286
- Exterior material, 313

F

- Facilities, plumbing, 304
- Farm population, 53, 70-71
- Farm Security Administration, 444
- Federation Home Loan Bank System, 187, 209, 254-257, 443, 444, 446, 458
 - accomplishments, 257
 - advances, 256
 - functions, 255
 - growth, 256
 - membership, 255
 - organization, 255
 - origins, 254
- Federal Housing Administration, 119, 167, 187, 208, 209, 218, 224, 225, 227, 243, 247, 249, 250, 262-277, 309, 443, 444, 446, 457-459, 479, 481
 - eligibility for insurance, 265-266
 - evaluation, Sections 203, 603, 270-273
 - mortgage risk rating, 267-268
 - National Housing Act, 263
 - nature of mortgage insurance, 267
 - origins, 262-263

- Federal Housing Administration, rental housing, Sections 207, 210, 608, 273-275
 RFC Mortgage Company, 275, 276
 scheme of operation, 265-266
 secondary market, 275-277
 Section 203, 265, 270
 Section 207, 265, 273
 Section 603, 269, 270
 Section 608, 274-275
 Title I, property improvement loans, 263-265
 Title II, mutual mortgage insurance, 265-268
 Title III, Federal National Mortgage Associations, 275
 Title VI, war housing insurance, 269-270
 Federal intervention, mortgage market, 251-254
 Federal National Mortgage Association, 272-275
 Federal Public Housing Authority, 444, 492
 Federal savings and loan associations, 244, 257-258
 Federal Savings and Loan Insurance Corporation, 244, 253-259
 Feudal tenure, 8
 Filtering, 321-334
 accelerated depreciation, 327-328
 conclusions, 333-334
 definition, 320-321
 impossibility of forcing, 332-333
 long-run view, 331
 market experience, 329-331
 quality change, 325
 role of new construction, 325-326
 surplus, at bottom, 327
 as check on production, 326-327
 as requisite, 323-325
 time dimension, 328-329
 Financial Survey of Urban Housing, 227
 Financing, ground rent, 223
 home, 221-228
 income properties, 228-232
 Fisher, Ernest M., 446
 Fixity of investment, 370
 of supply, urban land, 282
 Fixtures, realty and personalty compared, 8-10
 Fluidity of population, 83
 Foreclosure rate, 253
 Foreign immigration, 63-65
 Friction, costs of, 371-373
 Functional variation among cities, 39-41
 Functions, markets, 284-289
- G
- General contractor, 180-182
 George, Henry, 426
 Griffin, Clare E., 362
 Gross income, 347-349
 Ground rent, 223
 Guaranty, Veterans Administration, 277-279
- H
- Haig, Robert Murray, 371, 372
 Heterogeneity of supply, urban land, 283
 Highest and best use, 356
 Home Owners Loan Corporation, 259-262, 443, 457, 504
 accomplishments, 260-262
 functions, 259-260
 liquidation, 261-262
 origins, 259
 Home ownership, stock, 321-323
 (See also Tenure)
 Housebuilding, prefabrication, 203-206
 Housing, extent of land use, 87
 for unattached adults, 122
 Housing costs, 461-486
 building land-reduction potentials, 473-475
 capital costs, implications of reduction, 468-473
 reduction potentials, 473-478
 conclusions, 484-486
 cost of money, 478-480
 costs of industrial disorganization, 477-478
 definition, 464-466
 depreciation, 481-484
 deterioration, 482
 differential importance of the several costs, 466-468
 effect of reductions, 467-468

- Housing costs, environmental change, 483
 - labor cost reduction, 475-476
 - maintenance, 481
 - obsolescence, 483
 - price instability, 484
 - property taxes, 480-481
 - reduction, through product design, 478
 - through technological advance, 476-477
 - significance, 462-464
 - Housing demand, quality, 97-122
 - location, 113-114
 - price and rent, 114-120
 - style, 112-113
 - tenure (*see* Tenure)
 - testing quality, 120-122
 - type and size, 110-112
 - quantity, 88-96
 - death and divorce, 90-91
 - definition of demand, 88-89
 - elasticity, 94-95
 - marriages, 89-90
 - measurement, 95-96
 - migration, 91-92
 - population change, 93-94
 - sharing of dwellings, 92-93
 - unit of demand, 88
 - Housing industry (*see* Construction industry)
 - Housing issues, 444-446
 - Housing market, cyclical fluctuations, 334-345
 - history, 341-343
 - instability, 450-461
 - postwar, 434-442
 - imbalances and rigidities, 434-436
 - long-term implications, 441-442
 - origins of rigidities, 436-441
 - prewar, 442-444
 - Housing objectives, 446-450
 - Housing standards, minimum, 490-494
 - Housing stock, 302-306
 - age, 303
 - exterior material, 303
 - number of rooms, 305
 - occupancy, 305-306
 - rental value, 305
 - sanitary facilities, 304
 - state of repair, 304
 - Housing stock, tenure, 304-305
 - type of structure, 303
 - Hoyt, Homer, 386, 401
- I
- Immigration, foreign, 53, 63-65
 - Immobility of supply, urban land, 283
 - Imperfections, market, 296-301, 451-456
 - Incidence, taxation, 422-423
 - Income, gross, 347-349
 - Income properties, financing, 228-232
 - Indestructibility, urban land, 3
 - Industrial areas, 395
 - Industrial disorganization, 477-478
 - Industrial space, demand for, 139-143
 - changes in, 139-140
 - industrial districts, 143
 - locational considerations, 140-143
 - space needs, 139
 - Industry, location, 34-39
 - Instability, in housing market, 343-345, 450-461
 - changing the commodity, 451-452
 - conclusions, 460-461
 - control, 450-451
 - modifying the market imperfections, 451-456
 - rationalizing building industry, 454
 - relaxing institutional limitations, 452
 - sensitizing supply, 453-454
 - stability through social control, 456-459
 - stabilizing, of demand, 454-456
 - through mortgage credit, 458-459
 - of prices, 457-458
 - through understanding, 459-460
 - price, 484
 - Institutional limitations, modifications, 452
 - Interest rate, 224, 236-237
 - Investment, direct, 232, 250
 - Investment trust, 231
 - Issues, housing, 444-446
- J
- Johnston, Eric A., 449
 - Jurisdictional disputes, 195-197

L

- Labor, construction, 189-199
 - basic union objectives, 198-199
 - crafts, 191-192
 - full crews, 197
 - guaranteed annual earnings, 194-195
 - insecurity of employment, 194
 - jurisdictional disputes, 195-197
 - level of employment, 190-191
 - limitation of output, 197
 - postwar problems, 199
 - ratio of labor costs, 190
 - restrictions on union membership, 197-198
 - wage rates, 192-194
- Labor cost reduction, 475-476
- Land, as capital, 363-364
 - as fixed factor of production, 359-360
- Land contract, 219-220
- Land credit, functions of, 207-210
- Land description, 5-6
- Land development (*see* Subdividing)
- Land income, gross, 347-349
- Land policies, urban, definition of, 406-407
- Land return, 362-363
- Land use, competition of, 370-371
 - controls, 408
 - determination, 289
 - pattern, urban, 386-397
 - structure, basic theory of, 368-369
- Land utilization costs, 349-353
- Land value, 360-361
- Lease, long-term, 220-221, 231
- Lender, role of, 208
- Lenders, banks and trust companies, 246-247
 - individuals, 240-241
 - life insurance companies, 248-250
 - mortgage, 237-251
 - mutual savings banks, 247-248
 - other agencies, 250-251
 - savings and loan associations, 241-246
- Lending terms, 223-225
- Life insurance companies, 248-250
- Loan servicing, 225-226
- Location, 373-375
 - of cities, 33-34
 - of industry, 34-39

- Locational considerations, 138
 - office space, 135-136
- Long-term lease, 231

M

- Maintenance, 481
- Manufacturing and urbanism, 25-28
- Market, building lots, 306-312
 - concept, 280-281
 - functions, 284-289
 - adjusting supply, 286-288
 - capital improvement, determination of, 289
 - distributing existing space, 284-286
 - land use determination, 289
 - price determination, 288
 - timing of land improvement, 288
 - housing, postwar, 434-442
 - imperfections, 296-301, 451-456
 - local nature, 296
 - organization, 288-296
 - brokers, function of, 291-293
 - buyers, nature of, 291
 - sellers, nature of, 288-291
 - submarkets, 294-296
 - transactions, nature of, 293-294
 - owned homes, 321
 - rental, 312-321
 - housing stock, rental units, 313-318
 - marketing process, 319
 - rental housing origins, 319-321
- Master plan, in city planning, 412
- Materials, construction, 187-189
- Metes and bounds, 5
- Metropolitanism, 56-59
- Migration, of population, 91-92
 - rural-urban, 67-71
- Minimum housing standards, 490-494
- Mobility of population, 83
- Mortgage, common-law doctrine, 213
 - credit, stability through, 458-459
 - crisis, 254
 - debt, 238-240
 - development, 212-213
 - financing, 211-218
 - junior, 218-219
 - lenders, 237-251
 - lending, pattern of, 226

Mortgage, lien theory, 213
 market, federal intervention, back-ground, 251-254
 organization of, 233-237
 nature of, 211
 purchase-money, 221
 remedies in case of default, 215-218
 risk analysis, 227-228
 risk rating, 267-268
 terms, 209
 trust deed in the nature of, 214
 Mortgage bond, 230
 Mutual savings banks, 247-248

N

National Housing Agency, 438-439
 Natural increase, 62-63
 Negro population, 65-67
 Nucleation, 389-391

O

Objectives, housing, 446-450
 Obsolescence, 483
 Occupancy, 305-306
 Office space, demand for, 133-136
 basis of need, 133-134
 fluctuation in, 135
 locational considerations, 135-136
 One hundred per cent district, 387
 Operating costs, land utilization, 352
 Outlying business centers, 389-391
 Overcrowding, regulation, 498-499
 Owned homes, rental comparison with
 rented units, 323
 stock, 321
 value, 322
 Ownership, forms, 10-14

P

Participation mortgage certificates, 231
 Patman bill, 439
 Personality, realty, and fixtures com-pared, 8-10
 Philipson, J. Bion, 12
 Planning, city, 409-413
 master plan, 412

Planning, city, planning process, 411-413
 theoretical basis, 409-411
 land, 166-168
 Plottage, 354
 Police power regulation, 16-17, 494-502
 administrative deficiencies, 495-496
 conclusions, 501-502
 control of environment, 499-500
 failure, 494-495
 lack of alternative accommodations, 496-498
 prevention of substandard housing, 500-501
 regulation of overcrowding, 498-499
 Population, characteristics, 71-76
 age, 72-73
 education, 75
 family composition, 73-75
 marital status, 73
 occupation, 75-76
 sex, 71-72
 dynamics, 79-82
 farm, 70-71
 forecasts, 79-82
 natural increase, 62-63
 Negroes, 65-67
 sources of urban, 61-71
 Postwar housing market, 434-442
 Prefabrication, 203-206
 Prewar housing market, 442-444
 Price determination, 288
 Prices, stabilizing, 457-458
 Private capital, competition of public housing, 518-520
 Product design, 478
 Production of structures, 175-206
 Productivity, construction industry, 147-149
 Property, institution, 6-8
 limitations, 15-18
 Proudfoot, Malcolm J., 387, 389, 392, 393
 Public and semipublic use, demand for, 143-145
 Public domain, 4
 Public Housing Administration, 444, 492
 Public housing formula, 517-521
 Public records of ownership, 15
 Public Works Administration, Housing Division, 444

R

Rationalization, housebuilding industry, 199-203, 454

Reconditioning, 503-504

Redemption, equity of, 213

Redevelopment, urban, 427-433
 Detroit plan, 433
 inhibitors of succession, 428-431
 legislation, 431-433
 natural process, 427-428
 state laws, 432

Realty, personality and fixtures compared, 8-10

Refinancing, 223

Rent, certificate scheme, 507-512
 economic, 362-363
 effect of rent certificate plan, 509-510
 income ratio, 115-119
 as monopoly return, 365-366
 and price, 366-367
 rental housing stock, 317-318
 as residual, 358-359
 as unearned, 364-365

Rental housing, FHA, 273-275
 market, 312-321
 origins, 319-321
 stock, 313-319
 age, 314
 heating, 316
 number of rooms, 315
 persons per household, 317
 plumbing, 316
 rent, 317-318
 state of repair, 316
 type of structure, 314

Rental units, in housing stock, 313-318

Rental value, 305

Repair, state of, 304

Resettlement Administration, 444

Residential areas, 395-397
 movement of, 401-403

Residential builders, 185-187

Residential land use, extent of, 87

Retail location, 376-381
 basis of selection, 376-377
 buying habits, 377-379
 convenience, 379-381
 desirability, 379-381

Retail space, demand for, 123-133
 determining need, 125-126
 detrimental site characteristics, 129-130
 estimating sales volume, 127-128
 influencing factors, 124-125
 location, 126-127
 quantity, 123-126
 shape of parcel, 133
 site selection, 127-133
 site specifications for selected types, 130-133
 traffic counts, 128-129

Retail structure, 381-384, 387-395

RFC Mortgage Company, 275-276

Ripening costs, 350-351

Risk, financial, 208

Risk analysis, mortgage, 227-228, 267-268

Rolph, I. L., 387, 393

Rooms, number, 305

Rural-urban fringe, 59

Rural-urban migration, 67-71

S

Sanitation and urbanism, 32-33

Savings, media, 235

Savings and loan associations, 241-246
 direct-reduction plan, 242
 growth, 244
 history, 241
 interest rates, 243
 investment policy, 242
 lending terms, 242-243
 regulation, 244
 share-accumulation plan, 241
 size distribution, 245
 use of FHA, 243

Seasonal fluctuations, housing market, 337-338

Secondary mortgage market, 275-277

Sellers in the market, 288-291

Servicing, mortgage loan, 225-226

Share-accumulation plan, 241

Sharing of dwellings, 92-93

Shelter, costs (*see* Housing costs)

Single tax, 426

Site selection, retail, 127-133

- Sites, apartment, 174
 - commercial, 174
 - Situs, 373-375, 380
 - Social characteristics, cities, 76-78
 - and demand for land, 85-86
 - Social control, nature, 406
 - Social controls, stability through, 456-459
 - Standards, housing, 490-494
 - Stock issues, 231
 - String street, 388, 392-393
 - Structure, type, 303
 - Subcenters, 389-391
 - Subdividing, 164-175
 - commercial and apartment sites, 174
 - conclusions, 174-175
 - control, 415-421
 - financing, 171-174
 - improvements, 169-171
 - land planning, 166-168
 - nature of building lots, 165
 - place in production process, 164-166
 - private deed restrictions, 169
 - process, 166-175
 - social controls, 168-169
 - Subdivision, history of, 306-311
 - Subdivision control, 415-421
 - economic implications, 415-418
 - methods, 418-421
 - Subdivision lots, market for, 306-312
 - Submarkets, 294-296
 - Subsidy devices, substandard housing, 507-524
 - Substandard housing, conclusions on
 - abatement of, 523-524
 - definition, 490-494
 - prevention, 500-501
 - problem of, 487-488
 - reconditioning, 503-504
 - regulation, 487, 502
 - relief by private capital, 502-507
 - conversion, 504-505
 - direct private construction, 502-506
 - filtering down, 506-507
 - new construction, 505-506
 - remedies, 489-490
 - remedy through cost reduction, 521-522
 - through deflation, 522
 - subsidy devices, 507-525
 - aid to private builders, 512-517
 - conclusions, 516-517
 - Substandard housing, subsidy devices,
 - aid to private builders, effect on various functions, 514-516
 - public-housing formula, 517-521
 - competition with private capital, 518-520
 - objectives, 518
 - tax abatement, 520-521
 - the formula, 517-518
 - rent certificate scheme, 507-512
 - conclusions, 516-517
 - effect on rents, 509-510
 - long-run effects, 510-511
 - with police-power controls, 509
 - results, supply constant, 508-509
 - the scheme, 507-508
 - Succession, economics of, 403-405
 - inhibitors of, 428-431
 - Survey, government, 5-6
- T
- Taft-Ellender-Wagner bill, 418, 439, 440, 444, 445, 458, 517
 - Taxation, property, 18, 421-426, 480-481
 - administration, 423-425
 - deficiencies, 425-426
 - importance, 421-422
 - incidence, 422-423
 - lag in assessed values, 424-425
 - single tax, 426
 - use in directing investment, 426
 - Technological advance, 476-477, 304-305
 - Tenure, housing, 97-110
 - age and family status, 101, 105
 - cooperatives, 109-110
 - custom and social values, 103-104
 - family dissolution, 102
 - financial distress, 101
 - financial status, 105-107
 - history of home ownership, 98-101
 - long-term lease, 109
 - neighborhood decline, 102
 - new construction and conversion, 103
 - occupation, 105
 - ratio of home ownership, 98-99
 - relative costs, 107-109
 - Term, mortgage, 224-225
 - Terms, mortgage, 223-225
 - Title, transfer of, 14-15

Title I, FHA, 263-265
 Title II, FHA, 265-268
 Title III, FHA, 275
 Title VI, FHA, 269-270
 Trade as urbanizing force, 24-25
 Transfer of title, 14-15
 Transportation and urbanism, 28-29

U

Unattached adults, housing, 122
 Unions, 189-199
 United States Housing Act of 1937, 444,
 512, 517, 518
 United States Housing Authority, 444,
 492
 Urban economy, functional basis, 20-33
 Urban land, defined, 1-2
 economic characteristics, 281-284
 fixity of supply, 282
 heterogeneity, 283
 immobility, 283
 physical characteristics, 3-4
 policies, 406-407
 use pattern, 386-397
 Urban population, sources of, 61-71
 Urban redevelopment, 427-433
 Urban way of life, 82-85
 Urbanization, 24-33, 51-56
 agricultural surplus, 30-31
 ancillary activities, 29-30
 changing factors, 46-51
 exchange as a factor, 24-25
 manufacturing as a factor, 25-28
 sanitation, 32-33
 transportation as a factor, 28-29

V

Valuation, 355-362
 Veterans, guaranty of home loans, 277-
 279
 Veterans Administration, 277-279, 446
 appraisal, 278
 evaluation, 278-279
 guaranty plans, 277-278
 operations, 278
 Veterans' Emergency Housing Program,
 439-440, 445

W

Wage rates, 192-194
 Wagner-Ellender-Taft bill, 418, 439, 440,
 444, 445, 458, 517
 War housing insurance, 269-270
 Way of life, urban, 82-85
 Wholesale areas, 395
 Wholesale space, demand for, 137-138
 decline in, 137
 locational considerations, 138
 wholesale functions, 137
 Working capital, 187, 209
 Wyatt, Wilson, 439

Y

Yield insurance, 232

Z

Zoning, 413-415